EVERARDUS · MAYNWARING · MEDICINÆ · DOCTOR · ÆTAT · SUÆ · XX · 1665
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Morbus Polyrhizos & Polymorphæus.

A

Treatise

of The

SCURVY,

EXAMINING

Opinions of the most solid and grave Writers, concerning the Nature and Cure of this Disease.

Determining the whole matter from the latest Experiments, and best Observations.

By *EVERARD MAYNWARINGE* Dr. in Physick.

The Third Impression with additions.

Traversing some fundamental Hypotheses of Dr. *Willis* upon the Scurvy.

With a considerable inquiry, and true account of *Tobacco*, relating to this Disease.

LONDON, Printed: and are to be sold by the Booksellers. 1669.

LICENSED.

Octob. 13. 1668.

Roger Lestrange.

THE PREFACE.

THE frequent complaints I receive, and correſpondence I have with *Scorbutick* perſons, after a divers manner afflicted with this *Protean* diſeaſe, either viſiting, or by letter remonſtrating their *caſes* if far diſtant; gives me farther *information* into the various nature of this Diſeaſe, and affords ſome new matter to communicate, worth obſervance; eſpecially by ſuch as are ſubject to, and labour under the like *infirmities*. I have therefore this third time put pen to paper, that what remarkably hath happened in my *practiſe* and the uſeful obſervations I have noted in ſome cures may be communicated for the benefit of others profitable both to the *Phyſician* and the *diſeaſed*.

Many think, by *ſpeculation* and reading to know this diſeaſe ſufficiently; and I was of that opinion my ſelf, when I had collected and compared all the *Notions* and *Judgments* of Authors concerning the ſame: But coming into the

practice, and being exercised with several *Scorbutick patients*, differently seized and handled, with *contumacious symptoms* resisting my medicines and the usual method: I was untaught again by the *difficulty* of their *cures*; and therefore deserted the common *medicines*; framed other notions of the *disease*; sought out and wrought more *effectual medicines*, and a method of my own for cure, by daily observations and *success* dictating to me in practice. And having thus gradually gained a clear prospect into the *fallacious* obscure Nature of this disease by daily *experience*; I thought good to publish the *discovery*, of this *grand* Malady, in its origination, *latent* causes, various *phænomena's*, and dubious complications; it being a general concernment, as the *foundation* and *parent* of various infirmities, which you may well take notice of.

Cognitio sequitur curationes.

Amongst the *complaints* of the diseased none more frequently mentioned then the *Scurvy*, and none less known except by its title; most of them shewing a several *Character* of the disease, and in several *parts*; some *spots* in this place, others in another, and different *colours*; some *looseness* of *Teeth*, *putrid Gums*, ill-

ill-ſavoured *breath*; *pains* in ſeveral parts, *weakneſs* of the *legs* and *thighs*, *laſſitude* or indiſpoſition to *motion* or *action*, and many others *Symptoms* accompanying this *Polymorphean* diſeaſe, and although the *Signs* be many which appear, yet to the moſt they are rather a *diſguiſe* (ſave only the name *Scurvy*) to cheat their judgments, then a guide to lead them into the true knowledg and diſcovery of it; the variety of *dreſſes*, and *ſpots* that this diſeaſe puts on, and preſents it ſelf in; the variety of places and parts of the body differing in *Conſtitution*, *Farbrication*, and *Office*, that this takes up for its quarters, diſplaying it ſelf above board, and yet a *Juglar*: that, comparing one *Sign* with another they diſown their Alliance, as *heterogene* and ſeem to claſh one with another, as if they were not the *Off-ſpring* of the ſame *Parents*, the *fruits* and productions from the ſame *Radix*. Hence variety of Opinions, and Errors, concerning the Nature of this Diſeaſe, and from falſe *Principles*, erronious *Practices* in the Cure have enſued and are proſecuted by many *ineffectually* and *fruſtraneouſly*; which cauſeth many *Scorbutick* Perſons to think and ſay, their *Diſeaſe* is *incurable*:

incurable for having undergon so many courses in *Physick* Spring and Autum, and tryed Variety of *Medicines*; yet they are the same, or benefitted but a little, or for a short time, and Nature *Alleviated* for a while; but soon after they return to their former Condition or worse.

These *Considerations* moved me to *ventilate* this Subject, as well for my own satisfaction, and more Certainty in the *Cure* thereof, as also to inform others: and being bent upon a serious *Examination* and strict *Disquisition* tracing Step by Step, I made discovery of some *Errors*, which passed for warrantable, and unquestionable *Truths*, being supported by the authority of learned and approved *Writers*. Notwithstanding, I being sufficiently satisfied to the contrary, both Theorically and Practically by Reason and Experience; have receded from those common received *opinions*, as not agreable to the truth of latter *discoveries*, and the best reformed *Notions* of Diseases. I have not therefore bestowed these pains for an affected *singularity*, to be accounted a *Novelist* or *Innovator*; or for *Emulation* to others, in discovering their Failings to lessen their *Fame*; but that the *Dictates*

and

and impulſes of reaſon, illuſtrated and confirmed by obſervation in practice, have cauſed me to diſſent from ſome common *opinions*: For being fruſtrate of my intentions and aims in effecting *cures* by the uſual *method* eſtabliſhed upon *unſound principles*, was urged to make inquiries into the *cauſes* how ſuch fruſtrations and failings did ariſe: & being ſufficiently perſwaded and ſatisfied herein, I thought good to communicate my labours to others for their *information*, or *provocation* to *controverſy* upon diſlike; that theſe truths may be *traverſed diſcuſſed* and thereby *illuſtrated*, for the benefit of this and future Ages. If therefore any *diſſenter* be *diſguſted* at what I have delivered, thinking *antiquity* and his own *opinions* hereby thwarted and injured; I ſhall ſtand by theſe aſſertions, and reply to the *Opponent*.

Experientia propria eſt ſcientia optima.

Omnia in medicina accurate ſcrutanda.

E. M.

London,
Clarkenwell-Cloſe.

and impulses of reason, illustrated and confirmed by observation in practice, have caused me to dissent from some common *opinions*: For being frustrate of my intentions and aims in effecting *cures* by the usual *method* established upon *unsound principles*, was urged to make inquiries into the *causes* how such frustrations and failings did arise: & being sufficiently perswaded and satisfied herein, I thought good to communicate my labours to others for their *information*, or *provocation* to *controversy* upon dislike; that these truths may be *traversed*, *discussed* and thereby *illustrated*, for the benefit of this and future Ages. If therefore any *dissenter* be *disgusted* at what I have delivered, thinking *antiquity* and his own *opinions* hereby thwarted and injured; I shall stand by these assertions, and reply to the *opponent*.

Experientia propria sciencia optima.

Omnia in medicina accurate frustranda.

E. M.

London,
Clarkenwell-Close.

Viro Doctiſſimo, Amico ſuo ſingulari

Dno. Dri.

Everardo Maynwaringo,

Medico Peritiſſimo.

SPergratæ mihi fuerunt literæ tuæ, S. Amice plurimum colende, benevolentiæ & candoris in communicando pleniſſimæ: veræ & conſtantis amicitiæ (abhinc diu in *America* contractæ, poſtea hic feliciter continuatæ) ſymbolum & munus gratiſſimum. Gratias habeo maximas pro communicatis; habebunt & omnes pro tuis accurate in Scorbuto tractando laboribus (cum publici juris fuerint) magni ſane æſtimandis, ſerioque ab omnibus notandis.

Quamobrem multum deſidero, moram omnem abjicias, atque theſaurum illum miſeris ubicunq; ſcorbuticis feliciter aperias; ut medicamenta tua eximia Antiſcorbutica (ſecundum leges ſpagyricæ artis quam peritiſſime concinnata) Communi bono nulli etiam lateant; ut & languentibus, varieque hoc morbo

A cruciatis

cruciatis, eorum auxilio, quamprimum ſuccurras.

Plura notatu digna (vere & ſine blanditiis dico) tuis ſcriptis reperio: ingrata manu ea quidem me accepiſſe fateor. Perge itaque tu, quod facis; faxitque Deus, omnia tua ſtudia, in ægrotantium exoptatam valetudinem & nominis tui famam, feliciter cedant; de quibus nihil dubito.

Hiſce vale, & memoriam mei quod hactenus benigne feciſti, retine: meque promptum & obſervantem in omnibus promitto. *Dabam. Dublinii. Calend. Septemb.* 1664.

Chriſtophorus Laurentius.

Med. Doctor.

SYNOPSIS,

OR

A Capital Abreviation

of this Work.

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Page 3. line 9. *read* Στομαχάκη p. 10. l. 2. *Wierus* p. 15. l. 11. *Morbi.* p. 17. l. 20. *omnes.* p. 20. l. 1. *Extenſivè, intenſivè.* l. 24. *ſoon.* p. 30. l. 17. *Sympathically.* p. 38. l. 17 *vagary.* p. 40. l. 15. *ſtimulating.* p. 43 l. 4. *viſcera.* p. 45. l 3. *protrahitur.* l. 7 *aquoſam.* p. 83. l. 25. *Stomachick.* p. 88. l. 18. *attractionem.* p. 90. l. 12. *digeſting.* p. 118. l. 12. *Tivas.* p. 119. l. 12. *contemperation.* p. 117. l. 6. *ponitur.* p. 208. l. 27. *antecedent.* &c.

Quæ alia occurrunt, lector ingenuus condonabit.

CHAP. I.

Denomination of the Scurvy.

TImes and places have given ſeveral names to this Diſeaſe; proper and ſuiting with ſome *Symptoms* ariſing from the *Scurvy*, that did chiefly and moſt frequently afflict the Patient, in thoſe places, at ſuch times. From hence I find a great diſſent among *Authors* concerning the ſeveral *Appellations* and their *Etymologies*; queſtioning whether thoſe ſeveral names did belong to one and the ſame diſeaſe, or divers: which occaſioned ſeveral *Diſſertations* and *Diſputes* concerning the *eſſential cauſes* and manner of *generation*: And not only thoſe that differ in the Nomenclature, do diſagree as to the nature of this diſeaſe, but alſo others who agree in name, and allow its various dreſſes and diſ-

gniſes, yet diſſent much in their *opinions* concerning the nature and *generation* of it; that amongſt ſo many *diſſenters*, it is no eaſie matter to ſingle out the Truth, and confirm it; as the following *diſcourſe* will evidence the difficulty.

Diſeaſes for the moſt part, have *ſignificant* Names, whoſe *Etymology* diſcovers either the Nature of the Diſeaſe: as Hydrops, the Dropſie, from ὕδωρ; *Aqua*, Water: or, points at the part *principally* or *primarily* affected; as Pluritis, the *Pleuriſie*, from that *Membrane* compaſſing the Breſt, called *Pleura*.

Or, intimates the maner of invaſion; as Epilepſia the *Epilepſie*, from ἐπιλαμβάνω, *apprehendo*, to ſeize, or take ſuddenly.

Or, denotes the procuring cauſe; as *Lues Venerea*, the *Venereal Pox*.

Or, declares the manner of afflicting, as *Convulſion*, from *Convello* to pluck.

With many other, whoſe names do import and carry various ſignifications *pertinent* and *declarative*, which for brevity ſake I omit. That which I have particularly deſign'd to handle is

the

the *Sorbute*, or *Scurvy* in the Engliſh tongue; but in other languages, denoting ſome part *ſymptomatically* affected: In the *Daniſh* 'tis called *Scorbeck*, ſignifying a vitious depravedneſs in the mouth, becauſe in many it was diſcovered by looſneſs of Teeth, and putrefaction of Gums, to which the *Greek* name agrees, Σομακάκη. Others will have it an *Italian* word, deriving *Scorbeck* from Scornobocca, ſignifying a foul-mouth.

In the Low-Countries 'tis called *Scorbuyk*, ſignifying *torſions* or gripings in the Belly, which attend this diſeaſe in ſome perſons.

It is alſo called *Scelotyrbe*, from the ſpots and pains in the Thighs: It hath been called by ſome *Gingipedium*, from the Gums and Feet, that frequently are affected in this diſeaſe.

The Latin word *Scorbutus*, now moſt frequently uſed among *Phyſitians*, being a name not of long ſtanding, unknown to the *Ancients*, and therefore called by ſome a new diſeaſe, but falſly; and it is not againſt Reaſon to think this diſeaſe to be of as great *antiquity*, as moſt *infirmities* incident to the body; (as may appear hereafter) though

known by divers *appellations*, ſuting with ſome of the *ſymptoms*, or *products* that follow this Diſeaſe, yet inſufficiently and eroneouſly diſcovered in their Cauſes.

Concerning the ſeveral Names, whether proper or improper, I ſhall not inſiſt, the nature of the diſeaſe being the thing aimed at to be detected and proſecuted; and not to ſpend time upon words.

CHAP. II.

Antiquity of the Scurvy.

THe *Scurvy* which in former times lurked more privily, and ſcarce known but to the moſt *acute* diſcerning *Phyſicians*, by reaſon of the diſguiſe and various *ſignatures*, *ſpecifick* and *individual*, in which *fallaciouſly* it appeared; is now unhooded, and ſo detected, that few there are, though ſtrangers to the *Diagnoſticks* of this Art, but may call it by its name, upon the *erruption* or appearance of moſt, if not any, of its *concomitant* uſual *Symptoms*.

How

How this diſeaſe comes to be ſo familiar amongſt us in theſe latter years, and ſo much a ſtranger before, is not unworthy our labour to make enquiry into the matter.

For the *novelty* of this diſeaſe I find *modern* Writers pleading; ſome urging this argument, for that it hath not been known by this name but of late: as if its ſtanding and our underſtanding were coætaneous, and improved together to this heighth now arrived at.

Some will have it to be the offſpring of the *Pox*, and take its riſe from the year 1495, at the ſiege of Naples, from whence the *Pox* was firſt *introduced* into the world.

The *Argument* produced to father the Scurvy upon the *Pox*, is the *ſimilitude* and *parity* of the *ſymptoms* that accompany both, and therefore muſt needs be ſo near of kin; when it is hard to ſay, Whether ſhould bear the *denomination*.

But they will give me leave to think otherwiſe; that the Scurvy bears an antianter *date*, than either our knowledg of it under the *denomination* of the *Scurvy*; or the *riſe* of it from the year before-mentioned; or muſt con-

fine the *Scurvy* to a narrower compaſs and *latitude* than the uſual limits allowed.

But it is not my thoughts will prove the matter; I ſhall therefore give ſome Reaſons for my *Opinion*: and firſt I ſhall lay down this *Aſſertion* as the *baſis* to fix on:

That the Scurvy owns not one *univocal cauſe*, but is the Baſtard of many Parents, contributing to its *generation*, and hath its likeneſs *a fortiori in ſua generatione*.

Now if any can truly affirm that the Scurvy alwayes appears *inveſted* with *pocky ſymptoms*, I ſhall aſſent to his *Opinion*, that the Scurvy is the *product* of the *Pox*, *in ſpecie & latitudine ſua*; but that it doth not, I think none will or can deny.

If *Diætetick* cauſes will procure the *Scurvy*, then it is moſt probable that the *riſe* and *antiquity* of the *Scurvy* depends upon the *antiquity* of thoſe cauſes: but, Abuſe, ill cuſtom, and neceſſitous bad living in *Diæteticks*, are of great *antiquity*; therefore the *Scurvy* may challenge a great *Seniority* in the world.

The *Suppoſition* is affirmed by the moſt,

moſt if not all, the *Inference* from thence is very rational: the *Aſſumption* is a general received truth: the *Concluſion* then will hold good.

Sennertus gives in his *enumeration* of *procatarctick* and remote cauſes of the *Scurvy*; *Cibus, potus, aer, motus & quies, vitæ genus, ſomnus & vigiliæ, animi pathemata*: Meat and drink, air, motion and reſt, manner of living, ſleep and waking, paſſions of mind; theſe we call *diætetick cauſes*: to which he adds, *Febres, viſcerum diſpoſitio, contagium*: *Feavers*, ill *temperature* of parts, *contagion*. And theſe alſo he reckons in the number of *Cauſes* that generate the *Scurvy*.

Greg. Horſtius aſſents to theſe, or the moſt of them: *Engalenus* doth the like. *Sal. Albertus, Martinus, Bruncrus, Ecthius*, and other eminent *Phyſicians*. And for ſome of theſe Cauſes the *Scurvy* is ſaid to be *endemical* in ſome Regions and Countries; that is, from ſome common cauſe, as Air, Food, or Water, peculiar to that place, conſtantly promoting and diſpoſing to ſuch a diſeaſe. Now if the *Scurvy* hath dependance, and is procured by theſe cauſes which are *antiquæ*, we may juſtly and

Greg. Horſt. Engalen. Sal. Albert. Martinus Bruuer. Ecthius.

rationnally conclude, this diſeaſe to be antient alſo, and no new diſeaſe. And thoſe that *aſſert* this diſeaſe to be new, and of a late birth, do notwithſtanding *aſſign* ill diet, air, and bad cuſtoms, for cauſes; but theſe are no new *cauſes*; therefore no new *diſeaſe*.

Sennert. *Sennertus*, in his *Catalogue* of *Cauſes*, I told you, reckons *Feavers*, evil *diſpoſition* of parts, to be *remote Cauſes* of the *Scurvy*; and if the *Scurvy* ſometimes be the *relict* of ſuch Cauſes, we have no reaſon to think but the *Scurvy* hath been planted in the world much longer than to be called a *new diſeaſe*.

Now if long *Feavers*, *impreſſing* an ill diſpoſition upon the *viſcera*, parts *deſtinated* for *nutrition*, *introduce* the *Scurvy*; doubtleſs ſuch *Feavers* are not new: and then the *Scurvy* bears not long date after. And not only *Feavers*, but other diſeaſes may lay a ground-work for the *Scurvy*, having ſome *affinity* and *aſſociation* with all; no diſeaſe ſcarce comes amiſs, but the *Scurvy* is ready to join with it: few *chronick diſeaſes* go off, and many *acute* alſo, but leave an evill *impreſſion* upon the parts, which is a *Seminary* for the *Scurvy*, except a *prudent Phyſician* have the charge,

charge and a *tractable Patient* that will ſuffer him to *raze* out the *veſtigia* and *characters* of the diſeaſe, not diſcernable by your ſence.

But the cuſtom is with the moſt to *diſmiſs* the *Phyſician*, ſo ſoon as the fear of *death* is paſt, or *afflicting ſymptoms* and *dolours* be ceaſt; committing the reſt to Nature to work out, not thinking what is left behind, a *root* that will ſpring forth at a ſeaſon and *opportunity* moſt agreeable for its *production*; and then you little think it is the *relict* of a former ſickneſs, which by a prudent *Phyſician*, and your patience, might have been long ſince *eradicated*, and this *prevented*. But to return to our purpoſe:

Morbi Seminales ſuis temporibus prodeunt.

For the *Antiquity* of this *diſeaſe*. *Greg. Horſtius* ſtands up. *Etſi Scorbuti nomen recens & veteribus incognitum videatur, res ipſa tamen antiquis fuit notiſſima.* Although, ſaith he, the name *Scurvy* be new, and ſeems to be unknown to the *Ancients*, yet the *diſeaſe* was known to them. *Sennertus* is of the ſame *opinion*, alſo *Reuſner*, and *Langius*. By *Hippocrates* we may find this *diſeaſe* deſcribed; ſpeaking of the *Ileos Hæmatites*, where he deſcribes the

Greg. Horſt. Tract. de Scorb.

Senert.
Reuſner.
Lang. Lib.
περὶ τῶν ἐντὸς παθῶν.

Scurvy:

Scurvy: And likewiſe treating *de magnis Lienibus* of great *Spleens:* but *Mierus* and others will not have theſe *deſcriptions* to agree with the *Scurvy*, becauſe ſome of the *ſymptoms* are wanting; which is very vain to *alledge*; for, in no caſe we ſhall find all the *ſymptoms* to appear: And the *Scurvy* is of that *latitude* and ſo *variegated* by time, place, and perſons, that it is not *included* and *limited* with ſuch a certain *combination* and number of *ſymptoms*, ſome of which being wanting, it loſeth the *denomination*. And *Salomon Albertus* is of that *perſwaſion* that the *Scurvy* was known to the *Antients*, for in his *Epiſtle dedicatory* before his *Tract* of the *Scurvy*, he ſaith; *Et ipſe novus putatur, aſt perperam; quando natura ipſum non genuit noviter. ſed redinti gravit ſolum, ac ceu interpolavit, idq; ob aeris, aquarum, locorum, vivendique rationem, propter hominum temperaturam, ac œleſtium ſiderum influxu, ab ortuum obitumq; radiis alteratum. Agnitus ille primum Hippocrati fuit, mox Celſo qui pone ſecutus eſt, tandem etiam poſteris Straboni & Plinio.*

Sal. Albert.

Diſeaſes have their *intervals* and *mutations* whereby they ſeem to be new, as *Langius* notes in one of his *Epiſtles*. *Proinde nihil opus eſſe arbitror, ut meis literis*

Lang. Lib. 2. Epiſt. 14.

literis ſemper aliquid novi tibi ſignificem, quum exoliti Veterum morbi quo tanis denuo incrudeſcant & renoventur.

I meet not with one *Phyſician* that *limits* the *Scurvy* within its proper *ſphear*, and *circumſcribes* it within certain bounds and limits, *excluſively*, diſtinguiſhing it from all other *diſeaſes*, but wanders here and there, and will allow it to act a part in every Scene; *Scorbutick Conſumptions*, *Scorbutick Palſies*, *Scorbutick Gouts*, *Aſthmaes*, *Feavers*, *Convulſions*, *Apoplexies*, *Dyſenteries*, *Dropſies*, *Pleuriſies*, and what not?

Some tye up and reſtrain the *Scurvy* to this or that peculiar *antecedent* procuring-*cauſe*; others let it looſe again, and give it the whole field of *diæteticks* to wander in, for finding out its parents: How comes this new Upſtart (as ſome will have it) to be ſo familiar and aſſociate with all the diſeaſes incident to mans body, and to counterfeit them, in ſo ſhort a time? I am rather hereby perſwaded to believe they have been bred up together, than to be of ſo late *acquaintance* and *aſſociation*.

For the *deciſion* and finiſhing this Queſtion, I ſhall lay down theſe *Theſes*, conciſely determining the whole *debate*.

1. That

1. That as the *Phænomena* and manifesting *symptoms* of the *Scurvy* are various, so are the *procuring-causes*.

2. That the *Antiquity* of its procuring *causes*, as, bad air, ill dyet, sloth and idleness, confinement, melancholy, long sickness, &c. argues and proves the *seniority* of the *disease*.

3. That the new dresses and *disguises* of this *disease*, differing from the *symptoms* and *Phænomena* of the *disease* in former times, are but *gradual*, *constitutional*, and *individual*, discovering new *complications* of diseases, *degeneration* of humane Bodies by *seminal traduction* and abusive living, and not *essential constitutiue*-differences.

4. That if *accidental* and *characteristical* difference by new *additionol signatures*, do so far alter a disease as not to be the same, but a new *disease*; then not only the *Scurvy*, but the whole *catalogue* of diseases are to be new named; and not only now, but every year may receive new names, upon the same account: which is *absurd*, and renders our *Art* uncertain.

Morbificorum Seminum fructificatio varia.

5. That the *Scurvy*, *quasi genus morborum*, hath a *latitude* and *extent* more than a *specifick* difference, from whence

the

the *variegation* of the *Scurvy* is allowed, and comprehended within the circle of its *generical latitude*; so that the *variations* and new *pullulations*, are *derivative* from the old stock, but differing by *transplantation* in several *individuals* and *accidental complications*.

6. That a true *radical Medicine* respects not the *antiquity* or *novelty* of this *disease*; but, applying to the *vital* and *fundamental principles* of our bodies, is *efficacious* now, was so from the begining, and will be the same to the end of the world: so that the seeming new state and alteration of diseases puts us not to invent and seek for new Medicines, answering the *Phænomena*; but enquire if old Medicines be *radical* and rightly prepared; which if so, are then *durable* and of a constat use: For, Medicines are (at least should be) formed and intended according to the *radication* of *diseases*, which is certain; not from the *signatures* and sensible appearances, which are *various* and uncertain.

CHAP.

CHAP. III.

Of Countryes, and Places, more or less subject to the Scurvy.

Diseases, if well observed, we find to vary according to *Climats*, *Regions*, and *Places*: And this by reason the *constitution* of the *Air* is various and much different: In one place *healthy*, in another *sickly*: one *Air* disposing to this *disease*; another *disposing* to a different *disease*: *Air* is so necessary to life, that without it we cannot *subsist*; which *surrounding* us about, and being continually suckt and drawn in, must needs *affect* the body with its *conditions* and *properties*. And this is very apparent to *travellers*, who find great *alterations* of body, by changing their *climate*.

That the *alterations* of the *Air*, works new *affects* upon bodies, is *apparent* to those that dwell in the same place; for at the quarterly seasons of the year, when the *constitution* of the *Air* changeth, our bodies then are upon the *variation* also: Hence it is that

Spring

Spring and *Autumn* abound most with diseases; the Air then *assuming* new qualities *opposite* to its former *constitution*, sets new *impressions* upon our bodyes, which occasions various *æstuations* and *turgid fermenting* of the blood.

And not only the *Air*, but the common *food*, and manner of living in several places, inclines us to this or that *disease*: *Ex iis morbo contingunt e quibus vivimus.* Upon both accounts bodies are *disposed* to *health* or *sickness*. This is manifest by some *diseases*, that are either *peculiar* to some places, or much more common there then in other places: For example, the *inhabitants* of *Cranon*, a *City* in *Thessaly*, was much more *infested* with *pestilential* and *putrid diseases*, for the *disposition* of the *Air*, as *Hippocrates testifies*. *Lib.* 2. *Epidem*: The people of the *Alpes afflicted* with the *bronchotele* and *scrofulous tumors* much more than in other places, from the water that they drink being *impregnated* with some *mineral tincture*, as *Langius* observes: And the *Portugals* more apt and inclined to *Phthisical Consumptions*, from the *disposition* of the *Air*; as *Fernelius* notes.

Hippoc.

Langius.

Fernel. lib. 11 *de abdit rerum Causis Cap.* 11.

And

And this likewise is *verified* in the *compass* of our own *Country*; for in some parts of *England*, some diseases are very frequent and constant, that are more rare or seldomer in another part; and by the *sea*-side we observe the *Scurvy* to abound more, and to be worse then in other parts of the *Country*. But to draw our discourse neer the point, and *determine* the chief places where the *Scurvy* is *predominant* and most frequent. First, you must understand, that *diseases*, in respect of places, are said to be either *sporadical*, such as casually hapen, and is no constant nor very common *disease* in that place, but scatterred here and there: as, the *Pleurisie*, *Falling-sickness*, *Stone*, *Gout*, and such like. Or else they are *endemical*; such as *infests* many at a time, are common and constant to a place, from the nature of the *Air*, *water* or some general *cause* amongst that people; as the *examples* before given.

Now in what places or *Countryes* the *Scurvy* is *sporadical*, and where it is *endemical*, is the matter in hand; for it is both, in respect of divers places. The *Scurvy* is properly said to be *endemical* in most of our *Northern Ceuntryes*, that

border

border upon the *Baltick Sea*, or adjacent to the *German Ocean*: As *Denmark*, *Swedland*, *Norway*, *Frisland*, *Holland*, *England*, &c. But in *High Germany*, *France*, *Spain* and *Italy*, the *Scurvy* is accounted *Sporadical*, not so frequent, but here and there one. And *Riverius* (Physician to the King of *France*) in his *Praxis Medica* takes but small *cognisance* of this *disease*, as being very rare in his *Country*; and by way of *diminution* calls it *Scorbutica affectio* not *Scorbutus*; and joyns it with the *hypochondriac melancholy*, as little differing from it, or a *gradual difference* above it, having acquired some *malignity* to distinguish it. *Quia tamen Scorbutus hisce regionibus, ut antea dictum est, non est familiaris; & nos illo prorsus carere omnis medici nostrates existimant, noluimus eum absolute Scorbuti nomen donare, sed satius esse duximus Affectionem Scorbuticam appellare, quæ scilicet ad scorbuti naturam proxime accedat, verus tamem Scorbutus non sit. Est autem Scorbutus nihil aliud, quam affectio hypochondriaca, peculiarem quandam malignitatis gradum adepta.* *River. prax. med. Lib. 12. Cap 6.*

But upon strict *examination* we should find much of this to be *erroneous*

but I wave the prosecution at present and passe on; the following *discourse* will prove the contrary. This we allow, all places to have the *Scurvy*, yet not all alike; but some more, some less; in some places it is *sporadical*, in others *endemical* as in our own Country. *Sal. Albertus* notes that the *Scurvy* in his dayes (almost a hundred years ago) was more or less in all places where he *practised* and *travelled*, and he had been in many Countryes, both *Northern* and *Southern*. And gives this *testimony*:

Sal. Albert. Epist. ded. Hist. de Scorb. *Ego quidem nuspiam non reperi Scorbuti seminaria, quorsumcunque appuli, quemcunque in mundi cardinem curandi causa evocatus sum hactenus.*

But that some places should be more *afflicted* with this *disease* than others, is, by reason of some common *procuring cause*, more frequently and more constantly *prevaling* in one *Country* than in another; of which *causes* hereafter in their *proper place*, where we shall *treat* of the *procatarctick* or *primitive causes* of the *Scurvy*.

CHAP.

CHAP. IV.

How to discern the Scurvy in its various Signs, and Symptoms, or products, and complications with other Infirmities.

THe *Scurvy* not being *confined* to any particular part of the body, nor to any single or *solitary* cause, but being a *syndrome* or *concourse* of *diseases* and *symptoms conspiring* to its *deformity* and various appearance; of necessity the signs discovering will be divers, more or fewer, *consentaneous* or *dissentaneous*, according to the nature of their *causes*, and parts of the body from whence they do arise.

In the beginning of this disease acquired, when the *Seminaries* first sprout forth and appear, the *Symptoms* thereof are mild, and more easie to be *check'd* and *eradicated*. By time and neglect of cure its *radication* is more firm and

grounded, *extenſive* and *intenſive*, ſpreading in the body, and alienating the *vital principles* from their *genuine nature* and duties.

By *continuance* and length of time, it *arrives* at the full pitch, ſtate and ſtrength; appearing with *formidable* and almoſt *incorrigible ſymptoms*; having *ſeized* and taken up for its quarters both *principal* and *miniſterial* parts of the body, diſordering and perverting all the *faculties*; that acting contrary to their own nature and *offices*, variety of ſtrange *morbifick effects* do enſue, proportionable to the *irregularities* of each *faculty*: the whole body is now out of frame and order; the *harmonious oeconomy* and regular *government* ther-of, is now changed into a *preternatural morbifick* ſtate and diſorder; each quarter or ſeaſon of the year diſcovers ſomething new, and threatens ſomething worſe to be endured and undergone.

In the *diſquiſition* and ſearch to know aright and find out the nature of this Diſeaſe, you muſt obſerve its ſeveral *habits* and dreſſes, in which it *variouſly* appears: and by a ſtrict *ſurvey* of its *concomitant effects* and *products*, you may certainly diſcover its *being*, *forti-*

tude,

tude, and *gradual progreſs*, parts affected, and various *complications*.

Many and various are the *Symptoms* which accompany this *Diſeaſe*, though all do not appear in every perſon, but in ſome more, in others fewer, according to the greatneſs, *duration* and *progreſs*, and *complication* with other diſeaſes, *preceding* or *ſupervening* the *Scurvy*.

The *Morbifick* diſpoſition and *debility* of parts to *conſent*, *degenerate*, and be *depraved*, *contribute* much to the *deformity* and *variation* of this *Diſeaſe*. *Propter inæquale robur partium*; by reaſon of the Natural *integrity*, and *deficiencies*, *fortitude* and *imbecility* of parts in divers perſons; ſome have one part ſtrong and *vigorous* in its *Office*, not eaſily *depraved* & *vitiated*; another hath the ſame part, weak ſonn *conſenting* with any diſtemper, eaſily perverted from the *integrity* of its Office and *contributing* its vice And ſince the parts be divers, their Uſe and *Offices* various; their *Enormities*, *Vitioſities* and *Defections* alſo muſt be various, & their *Effects diſſimilar*, *heterogene*, & unlike, according to the *conſent* and *diſſent* of parts, in their *integrities* & *defections*.

Which being rightly underſtood, it is no wonder that the *Scurvy* appears in

divers colours and *shapes*, *acting* a part here and there in the body, in various *deformities*.

Now as the several parts in the body have their several *offices distinct* from each other, yet all *harmoniously* (in the *rectitude* of *Nature*) *co-operating subserviently* and *subordinately* for the preservation and welfare of the whole; so are there distinct *characters* for their duties and *deficiencies*; discovering which part acts in *integrity*, and which is *irregular*, *degenerates* and falls off.

From hence the *Scorbute* as it is *variegated* and *discordant* in the *Symptoms* and *Products*, which cheats the judgment of many, and *puzzles* them to *appropriate* a fit *Medicine*; yet may the able *Physician* hereby *collect* and find out the *conspiring* and *contributing* parts to the *difformity* of this disease, which rightly known, the difficulty of the cure is much abated.

Some complain of *laxity*, *gripes*, and breaking out often into *fluxes*; others complain of *costiveness*, but a stool in two, three, or four dayes; some complain of burning and flushing heats; others their limbs are *rigid* and stiff with cold, the blood setled, black and *livid*.

Some

Some are heavy, drowſie and ſleepy; others tired and worn out with watching, and *indiſpoſed* to the nights *refreſhment*; ſome have a ſlow, weak, *languid pulſe*; others a quick, fierce, leaping *pulſe*.

Some have thin, pale, watry *urine*; others thick, muddy, and high-coloured *urine*.

Some have black, looſe Teeth, and *putrid* Gums; the thighs and legs free from pains or ſpots: others the contrary, have ſpots and pains, but the Teeth and Gums ſound.

Some are troubled with an itching here and there; others moleſted with pains, *erratick* and wandring from part to part, or more *fixed* and conſtant in particular parts. Moſt are ſenſible of a weakneſs, *laſſitude*, or wearineſs, *indiſpoſition* and dulneſs of *mind*.

Some their Bodies pine away, waſt and are *conſumptive*; others grow *corpulent*, ſwell'd and puffed up, and appear *hydropical*.

Some complain of ſhortneſs of Breath, ſtraitneſs and *compreſſion* of the Breaſt, *difficult* or hard breathing, and *palpitation* of the heart; others their *vital* parts are more free, but complain

of the Head, *Hypochonders*, and Loins, &c.

Some are moleſted with thirſt, heat of the *Stomack*, and drineſs of Mouth; others are troubled with *ſalivation*, ſuperfluous moiſture and ſpitting.

Some bleed often at the *noſe*; others have *preternatural excretions* of blood in other parts: And women their *courſes* diſorderly.

Some have their *blood* groſſe, thick, and ſlow of *motion*; apt to be *ſtagnant* and obſtruct the ſmaller veſſels: others have their *blood* too hot and thin; *ſubject* to *inordinate ebullitions*, and *feavoriſh diſtempers* upon ſlight occaſions.

Pains and gnawing at the *Stomack*, gripes in the *gutts*, or ſtiches in the ſides or breaſt, torment ſome: others have pain in their heads, back, or limbs.

Some are afflicted with a *numbneſs* inclining to be *paralytick*; others with *convulſive* motions and *cramps*.

Some are troubled variouſly with *diſcolorations*, and *defædation* of the skin; *ſpots*, or *ſcurf*; *tetters* or *ringworms*, *puſtul's*, *bliſters*, and various *eruptions*.

Some

Some a *giddineſs* in the head ſeaſeth them; others their ſight fails, or are ſtruck *blind*.

As long *feavers*, or *accute* waſting *feavers introduce* the *Scurvy*; ſo the *Scurvy* alſo cauſeth divers *feavers*; and theſe *feavers* often times are accompanied with ſome unwonted *ſymptoms* relating to the *Scurvy*, that makes them differ from the common intermitting *feavers* of the *Ancients*; and theſe are our *irregular Scorbutick agues*, that are often called new *diſeaſes*: and theſe *Scorbutick Agues* are very *contumacious*, unleſs tamed with *Anti-ſcorbutick* and *radical Medicines*.

For the *complications* and *aſſociations* of the *Scurvy*, with other diſeaſes they are not to be *digeſted* into any *method* or order, but is a companion for all; *Scorbutick Conſumptions*, *Scorbutick Pox*, *Scorbutick Dropſies*, *Feavers*, *Palſies*, *Gouts*, *Convulſions*, *Aſthmaes*, &c.

The variety of *oppoſite* and different *Symptoms*, which accompany the *Scorbute*, do ſtartle many in their judgment, to determine certainly when they meet with the *Scurvy*, when not; and becauſe the *Symptoms* are not peculiar but common, and the effects of other

Diſeaſes

Diſeaſes as well as the *Scurvy*, it is no wonder if their Cure be ſo uncertain, *difficult* and ſeldom performed; ſince they are *equivocal effects*, obſcured in their cauſes by a dubious *complication*, and *alternative cauſation*.

To reſolve the *ambiguous*, and ſuch as ſtagger in their *judgments*; Take this *obſervation*.

That the *Diagnoſtick Signs* of the *Diſeaſe* uſually ſo accounted and moſt frequent, as *defects* in the mouth, pains, ſpots, weakneſs, *laſſitude*, &c. ſome or more; *antecedent cauſes concurring* ſome or more, as a cloſe Chamber-air, and *confinement* within doors, or a *Region* where the *Scurvy* is *Endemical*, groſs food, *ſedentary*, *inactive*, retired life, ſtudious, *melancholy* diſpoſition, or *ſplenetick indulging* ſleep and eaſe: In the *concurrence* of theſe *Cauſes*, *collated* with the Signs mentioned, a certain determination and judgment of the *Diſeaſe* will *reſult*; and from thence a certain *proceſs* in the *Cure* may enſue.

CHAP.

CHAP. V.

A Survey of Scorbutick Symptoms and Complications, inquiring into their Causes.

ALthough the *Scurvy* is *fallacious* in appearance, putting on several *forms* and shapes, according to the diversity of *individual* bodies, declining from the state of *integrity* and soundness into various *diseases* by a peculiar *propension*, from their particular *fabrication* and *constitution*, *radication* of their *vital principles*, customs and manner of living, which is divers: notwithstanding, a certain knowledg may be had by the several *signatures* that attend this *disease*; some of them *discovering* its *initiation*, others its *increment* and *progress*; some also declare its *state* and *confirmation*; others the seat of the disease.

The *Scurvy* in the beginning is difficult to be known, for that the signs are common to other diseases; as weight and

and heavineſs of the body, *laſſitude*, wearineſs or weakneſs without manifeſt cauſe, dulneſs or cloudineſs of the head, *&c.* but *conferring* with the *antecedent cauſes*, as a prudent *Phyſician* ought, he may eaſily determine from whence ſuch *ſymptoms* do ariſe, and have their *dependance*. Therefore when the *ſigns* are *dubious*, and a *ſuſpicion* only of the *Scurvy* appears, you muſt examine if the *Scurvy* be frequent in that place or *region*, whether the perſon be of a groſs and diſorderly dyet, *melancholy*, retired, *inactive diſpoſition*, or cauſe of grief have *preceded*; whether he or ſhe be born of *Scorbutick parents*; if they be *Splenetick*, or have a *Scorbutick bedfellow*: and if ſo, or ſome of theſe, you may then conclude the budding *ſymptoms*, though ſcarce diſcernable, to be *pullulations* and effects of a *Scorbutick root*, and will hereafter more plainly diſcover their nature, in a fruitful *production* and *maturity*, if not prevented by good diſcipline and *medicine*.

In a true ſtate of health, and *integrity* of *nature*, when all the *faculties* perform in the *rectitude* of their *duties*; the juces or liquors of the body in the veines

veines arteries and nerves have their due *conſiſtence*, *tinctures*, *ſapors*, *ſpirituous* and *balſamick* nature; from whence a *vegete*, lively and active body, a brisk, merry and *aiery* mind: but when theſe humours *degenerate* from their *purity*, the *faculties* decline their duties and *functions*, the *ſpirits* grow *languid* and impoveriſhed, *alienated* from their *lucid* nature; being either *extracted* from impure blood, and *ſcorbutick alimentary* matter, or clogged and defiled in their *channels*, by *ſupervening impure* additions, that cauſe them to *degenerate*: no wonder then if you feel a *Gravamen*, weight, and *inapitude* for *motion*; the body then begins to be a *load*, to wax heavy, when the *ſpirits* are not *generated* ſo plentifully, nor ſo purely: for ſuch as the blood is, better or worſe, ſuch will the ſpirits be from thence extracted, *pure* or *impure*; and the *faculties* thereby managed, will act *regular* or *irregular* (*cæteris paribus*) *proportionable* to the *fortitude* or *debility*, *integrity* or *alienation* of the ſpirits, their *agent* and mover: and as the *ſpirits* decline and are *deficient*, or clogged and fettered by *impure degenerate* matter, the *vigour* of the

the body and ſtrength of the *limbs* abate; from whence a *laſſitude* and debility doth *proceed*: And from hence the cloudineſs and dulneſs of the *brain*, ariſeth from this *ſcorbutick* matter, that *infeſt*, clog, and diſturb the *animal ſpirits* whereby they are not ſo active, brisk and lively.

Thoſe that complain of an *anguſt* ſtraitneſs or *compreſſion* of the breaſt, *obtuſe* pain, and ſhort or difficult breathing, or *palpitations* of the heart, moſt of them, are, or have been *melancholy* or *ſplenetick*; and have either a ſlow languid *pulſe*, or a quick labouring *pulſe*: theſe *ſymptoms* ariſe for the moſt part *ſympathetically* and by conſent from the *adjacent* parts, namely the *hypochonders* or *ſtomack*, which being diſtended loaded, or clogged, the *vital* parts do labour with the burden; the parts diſtended preſſing upon the *Diaphragma*, they feel a weight about the *region* of the Heart ſometimes; and this *Scorbutick* matter lodged in the ſpleen by occaſions *fermenting*, & waxing *turgid*, cauſeth great *Aſthmatick Paroxyſms*, by conſent from this part almoſt to ſuffocation; and ſome have dyed ſuddenly by the fit in a few hours: As I remember,

ber, about ſeven or eight years ſince, an able Phyſician, namely Dr. *Puleſton* at *Cheſter*, who being *Scorbutical* and ſubject to ſuch *Aſthmatick Fits*, went well to bed, and being ſuddenly taken in the night, was dead before I could come to him, though he lived in the ſame ſtreet.

In the ſame City ſometime after, a worthy Lady, ſoon after Delivery, all being well with her in the morning, I being preſent and conferring with the Midwife; yet after noon by a ſudden *fermentation* and *turgid* riſing in the *Hypochonders* (ſhe being formerly *Splenetick* and *Scorbutical*) was *ſuffocated* thereby, and paſt recovery before I could come to her, that finding her incapable of help, ſhe dyed preſently, in the preſence alſo of another *Phyſician*. And to confirm this *Aſſertion*, that although *Scorbutick* perſons are troubled in the *vitals* and parts for *reſpiration*, yet it is by *tranſmiſſion* and conſent often times, and their complaint pointed at is chiefly about the *region* of the *Stomack* and *Hypochonders* or Sides, under the *Diaphragma* or *Midriff*, that ſeparate the *vital* parts from thoſe of the belly; which *Eugalenus*, *Horſtius*, *Sennertus*, and other eminent Phyſicians alſo have obſerved. And

And further, This difficulty of breathing, *compreſſion* or *anguſtneſs*, is not alwayes, nor troubleth alike; but hath their *intermiſſions*, *recurrences*, *intenſions* and *remiſſions*, as the parts primarily affected are diſpoſed; and is chiefly perceived upon ſome paſſion, after exerciſe and any ſtrong motion of the body whence this *Scorbutick* matter is ſtirred, heated, *attenuated*, and provoked to *fermentation* and *turgency*: and from this degenerate *Scorbutick* matter, *fermenting*, the heart and vital parts is affected by the *genus nervoſum*, cauſing *palpitations*, various *pulſes*, faintings, ſwoonings, or inclinations thereto.

Sometimes the Heart and Vitals are primarily affected; as when the blood is impoveriſhed and diſpirited, it paſeth through the ventricles of the heart heavily; and thoſe parts for want of ſpirit and vigour of expanſion, ſuffer a coarctation and compreſſion: and upon the ſame ſcore all the vital parts do contract and leſſen in their cavities and ductures, and reſpiration is performed more difficultly and laborioufly. But when the ſpirits are vigorous and plentifully generated, theſe parts dilate and are expanded, the blood circulates

more

more freely and briskly, and the lungs discharge their office with facility and freedom.

The Mouth for the most part (not always) carries some sign of this disease: as bleeding of the Gums; this *symptom* happens to those whose blood by *degeneration*, is *acrid*, sharp and thin, thereby makes its way through the Gums, being of a spungious loose substance, sooner *penetrated*; and sometimes the Gums itch and swell with this *luxuriant* blood, which having lost its *balsamick* nature and grown impure, the Teeth loosen, *Gums* corrupt and putrifie, causing the breath to have an ill smell, and the mouth to have a bad savour or taste.

Pains arise in several parts, to *Scorbutick* persons, from the aforesaid causes; namely, *acrimony* of the blood and nervous juyce: which pains is much abated in some persons by often bleeding at the *Nose*, or *Hemorrhoids*, and nature finding vent that way, other *symptoms* abate and lessen; the blood being thus decreased, keeps within its own *channels*, is not so *turgid*, nor molesting to other parts, by *extravasation*: yet as this evacuation

This gives warning of a Consumption.

is beneficial in ſome reſpects; ſo on the other it *impares* nature, by *exhauſting* the *vital* ſtreams, the ſupport of our life. And therefore let none confide in that for a good remedy, to be elected, that nature uſeth in a way of *exigency*, being forced to ſuch an *expulſion*; and thoſe that have ſuch frequent *evacuations*, may conclude their blood to be changed from its *balſamick* nature, having acquired ſuch *ſtimulating qualities*.

Hence we may argue uſual *phlebotomy*, to be hurtful, although *alleviation* and abatement of *ſymptoms* do follow (except in a caſe of *turgency*, *plethory* and eminent danger) for bleeding does but *minorate* and *palliate*, not *meliorate*; it does not *eradicate* the *ſeminaries* of the diſeaſe, but only checks and abates a *luxuriant* blood; alters not its ſtate *qualitatively*, but impares nature by *emiſſion* of good and bad together: but that which is a good remedy and often to be uſed, makes a ſeparation, and ſends forth only the offending *cauſe*.

But to return to the point: Various pains I meet with in *Scorbutick* perſons, ſometimes fixed and conſtant to a part, con-

continual or *intermitting*; in others wandring pains, ſometimes here, ſometimes there; in the arms, head, ſhoulders, back or ſpine, breaſt, counterfeiting a *Pleuriſie*; thighs ſhins and feet. Theſe pains afflict the Patient like thoſe upon the *Venereal* ſcore procured; and oftentimes the *Scurvy* and the *Venereal Lues*, joyn their forces together, and then theſe pains proceed from their *complicated cauſes*: and when the *Scorbutick* and *Pocky* ferments imbrace and are united, they are thereby more firmly *radicated*, and with more difficulty *expulſed* out of the body, when theſe two joyn hands and *aſſociate*: and as they are contumacious, ſo their *ſymptoms* are fierce and cruel for the moſt part.

This is frequent; and the cure is performed with more difficulty if the venereal taint be ancient.

Some are afflicted with great headaches, on the top of the head, or the temple-*muſcles*, for the moſt part, and this ariſing from a biting ſharp matter or *acrid* fume, boaring as it were the membranous and moſt ſenſible parts, endeavouring a *ſolution* of *continuity*.

* This was the caſe of a young gentlewoman for ſome years, but afterwards cured by Antiſcorbutic medicines.

* Frequent pains of the Teeth accompany this diſeaſe in many perſons; ſometimes running from one Tooth to another,

ther, or all the Teeth on one ſide. And this *Eugalenus* and *Sennertus* obſerve. And the cauſe is not difficult to be demonſtrated; for in moſt *Scorbutick* perſons, the *Serum Sanguinis* abounds, is *acrid* and *punging*, which being tranſmiſſed, moleſts all *nervous* and *membranous* parts where it cometh: and here both *Nerve* and *Membrane* are adjacent or contiguous to the Teeth. Some will have the Teeth themſelves, the bony ſubſtance, to be ſenſible; but this is not pertinent here to diſcuſs, therefore I paſs it over: ſufficient that there is a *dolorous* cauſe, ariſing from a *Scorbutick degeneration* of the blood.

From the ſame cauſe *obtuſe* pains in the fleſh are felt by ſome, in ſeveral parts: alſo *lacerating* and pricking pains of the nerves and membranous parts; ſometime in the Breaſt or Sides, and then they are called *ſtitches* by many; ſometimes on the *Spleen-ſide*, ſometimes on the *Liver*, under the *Short-Ribs*: theſe are more *acute*.

* Thus it hapned to a gentleman at *Dublin* much tormented ſeveral times; until I put him upon the uſe of Antiſcorbutick medicines

* When this *acrimonious* matter hath *perambulated* and troubled many parts of the body, it happens conveniently at laſt into the *Guts*; *Cholick*, pains, and gripes immediately enſue; and if not drawn

drawn forth by *Cliſter* or other proper *Purgation*, makes its *exit* by a *flux* of its own procuring, after ſome *tragick acts* in that *ſcene*. But concerning ſuch fluxes I ſhall ſay more by and by.

Convulſive motions happen to ſome from this *acrid* matter, which invading the *Nerves*, cauſe them to *vellicate* and *twitch*: and many that complain of the *Cramp*, it ariſeth from this cauſe.

Some alſo their limbs are *contracted* or *diſtended*, that they are deprived of their uſe; and this from a *Scorbutick* matter affecting the *Nerves* and *Tendons*, cauſing a *rigidity* and *incapacity* for motion; now as the *Nerves* are the *conduits* to convey the *animal ſpirits* into all parts, to give them ſenſe and motion; ſo when the *ſuccus nervoſus*, does *degenerate*, and the ſupply of *ſpirits* fail; or by *obſtruction*, that they are not conveighed into the parts; the wonted actions of thoſe parts ceaſe, or are *deficient*.

And here you ſee the reaſon of a *Paralyſis Scorbutica*, a *Palſie* ariſing from the *Scurvy*, when the *Nerves*, *Ligaments*, and *Tendons*, are vitiated and afflicted by the aforeſaid matter; cauſing a *ceſſation* of their wonted *activity* and motion.

And as a precurſor or warning before ſuch accidents happen, a *ſtupor, numbneſs*, or *rigidity* of members not ordinary, doth trouble the *Patient* for a certain time before, declaring the *gradual* approach of ſuch *affects*: but ſometimes it ſeizeth the Patient ſuddenly, as *Eugalenus* relates of a *Sorbutick Cholick* terminating in a Palſie and reſolution of *members*, from a *tranſlation* or remove of the *morbifick* matter. *Pag.* 114.

Eugalenus.

Joynt-pains, or *Scorbutick-Gouts*, I obſerve frequently, ſeldom fixed and conſtant to a part; but moſt commonly running from one Joynt to another, and in its *vagare* other parts alſo are made ſenſible of its *perambulation*, by ſtitches, aches, *mordications*, or *lacerations*, *diſtentions* and *vellications*. This humour is *ſerous*, thin, and very movable, endowed with penetrating, ſearching properties, that makes it thus active and *fugitive*: and indeed the *Archæus* of the parts is provoked by its preſence, and with indignation *tranſmits* it from part to part, unwilling it ſhould lodg or ſettle in his *territories*, being *hoſtile* and troubleſome.

And

And if this *acrid* humour get into the *urinary ductures*, it counterfeits the Stone, cauſeth the *Vriters* to *vellicate* and twitch in the ſmall of the back, towards the flank and *region* of the bladder; and the *Vriters contracting* hereby, makes a ſuppreſſion of *Vrine*, a ſtoppage of water for the time. Their *Vrine* for the moſt is high-coloured, red, thick and ſandy. Many upon this cauſe complain of great pain in their backs, ſuppoſing it to be the *Stone*, when as it ariſeth from a *Scorbutick* humour infeſting thoſe parts.

Fluxes and looſneſs of the Belly, accompany the *Scurvy* in ſome; the cauſe of which *Sennertus* and others *impute* to the *debility* of the *Liver* and *Veins*, which do not attract the *Chyle* ſufficiently, but remaining in *primis viis*, is there corrupted and ejected with the *feces* or *excrements* by ſtool: but this opinion will not hold, ſince the *Liver* is diſcharged from the office of *ſanguification*, and the *diſtribution* of the *Chyle* otherwiſe aſſigned.

I have met with ſeveral deluded thus, having uſed medicines for the ſtone without any relief but freed afterwards by proper medicines againſt the ſtone.

Theſe *Fluxes* may be cauſed two wayes: Firſt, the *Chyle* or *alimentary* juice of the firſt digeſtion, being *tranſmitted* from the Stomack, *acid* and ſharp

(as it is natural in that place) receives a *tranſmutation* in the *Duodenum* or firſt *Gut*, from the *balſamick felleous* liquor, diveſting the *Chyle* of that ſharpnes which it had from the *ſtomachical* ferment into a more *balſamick ſaline* nature; and being thus changed, is then gratefully received by the *Venæ Lacteæ*, which otherwiſe they reject, having ſuch an *hoſtile* quality not to be admitted by them (according to that of *Helmont*, *Acidum extra Stomachum Corpori eſt hoſtile*) and this *acid Chyle* ſo rejected, is turned down the *Guts*, griping as it paſſeth, and *ſtimularing* to *expulſion*.

Helmont.

Or ſecondly, Theſe *Fluxes* may be cauſed thus: In *Scorbutick* perſons, at leaſt in moſt of them, the blood is *acrimonious* and *degenerate* from its *balſamick* ſtate and purity; now the *Meſaraick Veins* (*arteries* ſome will have) being *inſerted* and *terminating* in the *Guts*, Nature being provoked and moved at this injurious gueſt, *ſeparates* and *ſequeſters* this *acid* and depraved matter for her own relief, and bringing it by theſe *Ductures* to *exterminate*, the *Guts* receive it, where meeting with the *ſtercoratious ferment* of thoſe parts, *ebulli-*

ebullition, *fermentation* and *ſtimulation* forthwith enſues upon their *congreſſion*: Hence *Fluxes* of various colours according to the nature of the *degenerate* matter, and diſpoſition of the bowels.

And to this purpoſe, a learned *Phyſician* ſpeaking of the uſe and office of the *Meſaraick Veins*, diſſenting from others, ſaith, *Sed nos ſentimus per venas illas omne excrementitium ex omnium venarum anatome per eas vias ad communia inteſtina labi, & cum ſtercoribus ſtomachi ad monoculum uſque & ſic ex corpore expelli:* that is, But we do judg, that by thoſe veins all *excrementitious* matter is brought to the *Guts* from all the *Veins* of the body, and with the *feces* is caſt forth. *Kozak de ſale pag.* 218.

Theſe *Fluxes* are not to be cured with aſtringent *Medicines*, but with thoſe which are proper for the diſeaſe, cutting-off the cauſe, and *eradicating* the foundation thereof: and this *Sennertus* warns you of, ſhewing the danger of ſtopping thoſe *Fluxes* imprudently in theſe words: *Quacunque autem de cauſa, & quocunque modo generetur fluxus alvi in Scorbuto, hoc peculiare habet, quod adſtringentia medicamenta* A patient upon the unadviſed ſtoping of ſuch aflux fell into violent pains, convulſive motions, and oppreſſion of the vitals threatning life.

Tract. de Scorb. pag. 75. *menta plane noxia in eo ſunt, & ſummam anguſtiam, ſpirandi difficultatem, ac animi deliquii & ſuffocationis periculum in ducunt; cum materiam vitioſam in venis detineant, & in viſcera magis impingunt.* That is, From what cauſe ſoever, and after what manner ſoever a *flux* of the belly is begotten in the *Scurvy*, this property it hath, that aſtringent *Medicines* are manifeſtly hurtful, and do procure *anguſtneſs* and difficulty of breathing, as alſo danger of *ſwooning* and *ſuffocation*; becauſe they detain the vitious matter in the veins, and impact it more in the *bowels*.

As ſome are troubled with theſe frequent *eruptions* and *fluxes*, ſo on the contrary, *Coſtiveneſs* and *Conſtipation* of the Belly afflicteth others; and this either from the heat, *ficcity* and dryneſs of the *bowels*, by intemperate bad dyet, and ill cuſtoms: or that the *humidity* is exhauſted and conveyed otherwiſe by ſweat or *urine*, which takes away and abates the *lubricity* of the *inteſtines*.

Scorbutick Feavers are frequent to thoſe that obſerve them, and are able to diſtinguiſh from what *radix* a diſeaſe doth ſpring: and as the *Scurvy* doth pro-

produce *Feavers*, ſo long *Feavers* introduce a *Scorbutick* diſpoſition, by changing of the blood, and *impreſſing* upon the *Vicera* for nutrition, an evil diſpoſition, or vitious *alienation* from their *genuine craſes* and *ferments*: and this *Sennertus* alſo affirms in his third Chapter *De Cauſis remot. Scorb.* where he ſaith, *And Feavers often make for the generation of the Scurvy, ſince by them a melancholy humour is eaſily accumulated; for humours by a feavouriſh heat are become aduſt, and yellow Choler is changed into black, which chiefly happens about the ſtate of the diſeaſe, when both continued and intermitting bilious Feavers do degenerate into quartanes, and from hence into the Scurvy: tertian Feavers alſo, which begin in the Spring-time, and after the ſeventh Paroxyſm are quotidian, for the moſt part they endure long, and at length terminate in the Scurvy.*

To the matter aſſerted, this *Author* agrees, as the preceding words declare; *de modo* I cannot *aſſent* to him, but of that hereafter.

* That *Feavers* and *Scurvy* do commute and complicate, daily experience doth manifeſt to Learned *Phyſicians*, that

*The new agues that ſtart up are ſcorbutick; unwonted and irregular in their ſymptoms

that are *critical* obſervators: and thoſe intermitting *Feavers*, called, *Agues*, which are looked upon and accounted by the vulgar and unknowing, as trivial ſlight *diſeaſes*; and, as I have heard ſome ſay, *An Ague in the Spring is as good as Phyſick*: but they little conſider what *ruine* theſe *Agues* bring to the beſt tempered bodies; what alteration and change they make in the *maſs* of blood; ſeldom recovering its former ſtate and purity, if they continue long and neglected: and at their *ceſſation* and departure you think all is done, the danger and the *prejudice* paſt, and you *in ſtatu quo prius*; but now begins the *Scurvy* to act its part, ſlily and gradually to creep upon you, except by the advice of a skilful *Phyſician*, you raze out the *veſtigia* of the former diſeaſe, *characterized* and *impreſſed* upon the *Viſcera* for nutrition, by *alienating* their *ferments* from their *genuine* and *primitive* natures, from which *ſeminaries* the *Scurvy* will ſprout forth.

Hereby you may perceive the ſucceſſion and *commutation* of diſeaſes, how one diſeaſe *introduceth* and is the *preludium* to another. And this Dr. *Willis* confirms in his *Diatrib. Philoſoph.*

pag.

pag. 128. treating of *intermitting Feavers*, (called *Agues*) saith: *Sin vero diutius protrahiter (scilicet febris) & sanguis a temperie seu diathesi acri & biliosa nonnihil immutatus, in naturalem non restituitur, quandoque in acidam & æquosam, aut etiam ponticam degenerat; unde Febris tertiana diuturna, in quotidianam aut quartanam transit; sæpe etiam, quia sanguis a diuturna hujus Febris mora valde depravatur, Ictterus aut Scorbutus, aut Cachexia succedunt*: But if the Feaver be *protracted* longer, and the blood changed by an *acrid* and *bilious* disposition or temper, is not restored to its natural state, but sometimes degenerates into an *acid*, watry, or *pontick* condition; from whence a long *tertian* passeth or commutes into a *quotidian* or *quartane*; and often also, because the blood by a long continuance of this *Feaver* is greatly depraved or vitiated, the *Jaundice*, *Scurvy*, or ill *habit* of body succeed.

The *Feavers* and *Scurvy* do commute and *complicate*, daily experience doth manifest to Learned *Physicians*, that are *critical* observators: and these *Scorbutick Feavers* are of all sorts, *Hectick*, *continual* and *intermitting*, *malignant* and

and *Peſtilential*: and in this laſt *Plague* in the City of *London* I obſerved, being with ſeveral viſited with the diſeaſe, that thoſe bodies which were deeply tainted with the *Scurvy*, had the *Peſt* in a more fierce and *direful* manner: and ſuch bodies are more apt to receive the *Peſtilential Contagion*, being a fit *previous* diſpoſition and *aptitude* for it, than others whoſe bodies were more pure, that by ſuch a *diſſimilarity*, did more ſtrongly reſiſt and refuſe admittance from without, nor apt from within to make ſo great a mutation in the *ſpirits* and *liquors* of the body. And that the *Peſt* and *Scurvy* ſhould *complicate* and *unite* freely, there is much reaſon for it, if we conſider the *affinity* and *parity* of *ſymptoms* that is between them; I mean when the *Scurvy* is exalted, hath attained to its full ſtate and perfection: the *Scurvy* is then *contagious*, though not in ſo high a nature; hath its ſpots, *tumors* and *ulcers*, not unlike to thoſe of the *Plague*: and although the F*eaver* be not ſo acute, yet there is a *febrile* putrid heat, commonly waſting and preying upon the *vitals*: or rather (according to the Doctrine of *Helmont*) the *Archæus*, which is the

vital

vital ſpirit, ſpends and wears it ſelf away by a conſtant *perturbation*, cauſed through impurity and *degenerate* matter wherewith it is clogged and *ſuffocated*; and wanting a due ſupply of pure aliment, to *extract* ſuch *ſpirits* from, thereby to maintain the continual *expence* and *tranſpiration* that the body ſuffers; hence *enervation*, *atrophies*, and *conſumptive* waſtings do enſue. (But of this more at large in my Treatiſe of Conſumptions.)

That which the *Peſt* doth ſuddenly, *Scorbutick Feavers* do the like oftentimes, though more ſlowly: hence *malign* ſpots appear upon the *Corps*, as *characters* manifeſting the *virulent* nature of the *diſeaſe*; and theſe are commonly called *ſpotted Feavers*, which may rightly be termed *Scorbutick Feavers*.

Engalenus, *Lib. de Scorb. pag.* 180. makes mention of *Scorbutick Peſtilential Feavers*, and gives an account of ſome, to which he was an eye-witneſs. *Martinus* alſo compares *Scorbutick Feavers* with the *Peſt*, by their ſimilitude of *ſymptoms*, and reckons up moſt of the common and chiefeſt *ſymptoms* of the *Plague*, to attend upon *Scorbutick Fea-*

Engalenus.

Martinus.

Tract. de Scorb. *Feavers* very often: *Sennertus* doth the like; and alſo ſaith, that the *Scurvy* is complicated with all manner of *Feavers*, ſo that he which will cure them, muſt not be guided by the doctrines and *ſymptoms* ſet down by old *Authors* (as did not diſcern the latent *Scurvy*) nor make a judgment of them from the number of dayes and fits; but by the *propriety* of their ſigns. And Dr. *Thompſon* in his *Loimologia*, derives the late *Peſt* from an high degree and advance of the *Scurvy*; his words are theſe: *Now ſometimes contemplating the ſtrange diffuſive nature and encreaſe of the Scorbute, the high degree of malignity it did aſpire to, and how it crucified and vexed poor mortals, making a meer mock at the trivial Medicines of the Dogmatiſts, I could not be perſwaded but that in the proceſs of time it would at laſt cauſe (upon outward irritating occaſions) ſome tragical Cataſtrophe among us, and expreſs in a direful manner, the grievous effects of that ſubtil poyſon which lay couched and lurking in the body.* Seeing then there hath been in mans body ſuch a previous *Scorbutick malignity*, and ſtill is, being now *graduated* and *exalted* to an high pitch of *virulency*, from

from ſeveral *occaſional* cauſes from within and without; and ſith it is νῦσος πολύμορφος, as it were an Ape imitating moſt *affects*, I conceive it no great *paradox* or *abſurdity* to aſſert, that the Peſt ſometimes hath principally derived its being from this malignant diſeaſe, with whoſe nature it much *ſymbolizes*, moſt of whoſe *ſymptoms* are *parallel* with each other.

Pag. 39. In the margent read proper medicines againſt the Scurvy.

Conſumptions do often follow and are *complicated* with the *Scurvy*; in ſome the thighs, legs or arms do firſt diſcover it, the fleſh becomes *flaccid* and limber, the *skin* looſe: others their whole body decayes, ſhrinks and is *emaciated*; and this by reaſon the body is defrauded of good *alimentary* juyce, the *nutritive faculty* fruſtrated in its office through impurity and *degenerate Scorbutick* matter, alienating the craſis of the parts, and vitiating the maſs of blood.

Conſumptions.

And theſe *Conſumptions* which are *radically Scorbutick*, are not cured with that Method and *Medicines* which are preſcribed by the *Ancients*, and is the common practiſe in theſe dayes; as Aſſes milk, *Jellyes* and *reſtaurative* Broths; with which we ſee daily, how

Tratiſe of Conſump. pag. 52. and 53.

many linger and pine away, under the diligent uſe of ſuch means: but the main of the Cure lies in *Anti-Scorbutick Medicines*, ſuch as are *radical*, and apply to the *vital principles*; that evacuate the *Scorbutick* matter, *tranſpire* putrid exhalations and vapors, and *roborate* the *faculties*; and then *nutrition* will come on apace. But I ſhall be brief in this point, becauſe I have Diſcourſed this in another tract.

Treatiſe of Conſumptions.

Several of theſe *Scorbutick Conſumptions* I have had under *cure*; which have wearied out both *Phyſician* and *Patient*, in the common courſe of *reſtaurative Medicines*; but have yielded to the *efficacy* of *radical Medicines*. I ſhall give you ſome particular account of one Perſon, a man about Thirty years of age, *eminently Conſumptive* and *ſcorbutick*; In *December* laſt, being brought to *Clerken-well*, rather to dye there, then hope of cure: He had been long kept in a courſe of *Phyſick*, but declined ſtill and grew worſe. I was brought to him to give my *judgment* of him, if there were any *poſſibility* to *recover* him. As he lay in his bed, (as he had done for ſome daies, not able to ſit up) I *veiwed* and *examined*

ined him as to his paſt and preſent condition; what means and *Method* of *Phyſick* had been uſed, how the *diſeaſe gradually* came on; what parts chiefly *debilitated*, what courſe of life he had lived; and what elſe might give me *ſatisfaction* in the nature and cauſes of his *deſperate ſickneſs*. I ſaw his face was perfectly *Hippocratical*, ſhrunk up with a dead pale countenance, and hollow eyes; the fleſh of his body and limbs, quite gone; only a skin to cover them; which made him *complain* that his bed gall'd him. His *pulſe* ſcarce to be felt, his ſleep gone from him, and little of a man left but his *reaſon*, and *ſpeech*; which was ſomething ſtrange to me that he ſpake ſo well, and ſo rationally to every *quæſtion*; and the man ſo decayed and ſpent, as to every thing elſe. The *Miniſter* of the pariſh was ſent for to him alſo; *judging* his caſe more fit for *ſpiritual* advice, than *natural* means. But withal deſirous to try if there were any *poſſibility* to reſtore him; his wife therefore and other *relations* deſired my *aſſiſtance* and care of him ſo long as he was alive.

Upon their *importunity* I did undertake, though I ſaw no *incouragement*,

and was unwilling to *defame* good *Medicines* in ſuch *deſperate hopeleſs caſes*. But a friend to the ſick man, formerly a *patient* of mine that had uſed ſome of my *Medicines*, being in the family, did incourage them, and oblige me to adminiſter to him; that if he dyed my *Medicines* would not be prejudiced in their deſerved *fame*, for that he could *teſtifie* their worth. Whereupon I proceeded, and appointed, how the *Patient* ſhould be ordered, and ſent him an *Elixir*, to be taken twice in the day, which relieved his ſpirits; And a *ſomniferous Extract*, to take at nights, which gave him refreſhing ſleeps, and *comforted* him very much. Thus he continued for ſome dayes, and gained ſtrength; then I *exhibited* one of my *Scorbute pills*, which operated twice or thrice with him, and no diſturbance in the *operation* or *inconvenience* after, but the *Patient* did come on. Then I appointed him a *reſtaurative eſſence* (that I uſe in theſe caſes) and another *Pill*, 3 or 4 dayes after, which ſucceeded very well, and our hopes very great.

But one night late, he fell into a great *hæmorrhage*, a bleeding at the noſe

noſe which continued, that I was called upon before day, and the patient ready to dye away. Several means was uſed before it ſtopt; and according to the account of the ſtanders by, we *judged* a gallon of blood at leaſt to have been loſt. The *Patient* then lay like a man half-dead, and our hopes blaſted. The next day his limbs *ſweld* and puft up; ſcarce able to fetch his breath, and lay in a very *deplorable* condition: notwithſtanding, having begun, I did not deſert him, but continued my care and advice in the uſe of means, the *Patient revived* again after a few dayes, gave *incouragement* to our *proſecution*; and I was very deſirous he might live, being preſerved almoſt to a *miracle*. His *ſtomack* after a while was ſo great that no perſwaſions could *moderate* him; eating as much at once as would ſerve two men in *health* but it did not hurt him; and he gained *ſtrength* daily, that in a ſhort time (beyond all expectation of his *relations*) he was able to goe abroad, and is now alive at this time.

CHAP. VI.

Primitive, External and procuring causes of the Scurvy.

THe *Procatarctick* and remote *causes* of the *Scurvy*, that gradually *introduce* and lay the *foundation* of this diſeaſe, are generally agreed and aſſented to, by *Engalenus*, *Sal. Albert*, *Martinus*, *Horſtius*, and others, to be theſe: *Meat* and *Drink*, *Air*, a ſedentary inactive life, *ſleeping* and *watching* immoderatly, *paſſions* of *mind*. *Feavers* and long *ſickneſs*, a *dyſcraſy* of parts, *advenient* or *hereditary Contagion*.

To which I muſt add another great *procurer*, not noted by any that hath treated of this *ſubject*; and that is, *Tobacco*, as it is uſed by *ſmoaking* in a *pipe*. And I may ſubjoyn another, and that is, Immoderate *venus*.

Tobacco.

Meat and drink. *Mala victus ratio*, inordinate and irregular *eating* and *drinking*, does *introduce* the *Scurvy*. *Ex iis morbi nobis*

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contingunt e quibus vivimus: As by convenient and proper feeding, *nature* is preſerved, and our bodyes that are in a continual *flux* and *tranſpiration*, are repaired by *tranſmutation* and *aſſimilation* of good food received; ſo on the contrary, *diſproportionate* and *inconvenient* feeding, does *labefactare vitæ principia*, Debilitate *nature*, diſorder the *functions* of the body, and bring a *dyſcraſy* of parts, and *alienation* of the peculiar *ferments*; Whereby a depraved *ſuccus* is *generated*, that inſtead of an *eutrophy*, a good nutrition; there is a *Cacotrophy* a bad addition; or a *Scorbutick Atrophy*, a *depauperation* and *macilent exhauſtion*.

Meats uſually accounted more apt to induce the *Scurvy* are theſe. *Beef* chiefly old, or *Bulls-fleſh*, *Goat*, *Boar*, eſpecially long ſalted; *Bacon*, *Sea-fowl*, and other *Water-fowl*, *Cabbage*, *Beans*, and ſuch like. Not only the *ſubſtance* and *properties* of food is to be obſerved; but alſo the fit *quantityes*, due *proportions*, and ſeaſonable *times* are conſiderable.

My own thoughts in relation to *dyet* is thus much, that groſſe *meats*, and ſuch as do not eaſily *digeſt* with this or that

perſon are to be avoided; but leight meats and ſuch as the *ſtomack* doth well *agree* with, *deſire*, and *digeſt* beſt, keep to ſuch. That which may be injurious to one mans body, may be wholeſome and agreeable to another.

That the conſtant *uſe*, and plentiful feeding upon the *meats* aforeſaid or ſuch like, are injurious and may *induce* or *promote* the *Scurvy*: But, to pleaſe the *pallate* now and then if deſired, and lightly to feed or taſt them, cannot prejudice.

It is good in the general to avoid *meats* over ſalted, or dryed; hard, tough, and groſſe *meats*. *Pye-cruſt* and *Cruſt* of *bread*, which lay too great a burden upon the *digeſtions*; being long in *volatiſing* and *fermenting*: nor is the *nutritive ſuccus*, from thence ſo good. But ſuch as are light, *ſucculent*, *volatile*, and ſoon *fermenting*, either by nature, or ſo prepared by art and dreſſing; is the beſt feeding.

Hence it is that *Sea-men* and *Souldiers*, being of a hard, groſſe, and careleſs dyet, (ſometimes conſtrained by neceſſity to ſtrange food) are moſt of them *Scorbutical*. And in *Navies* and *Camps*, *Scorbutick Feavers* are very fre-

frequent, and arrive to a great height of *malignity*, ſweeping them away like the *Plague* ſometimes, of which their feeding is one great cauſe to intiate; and then propagated by *Contagion*. And I remember, in a hard and long voiage at Sea, moſt of our people were very *Scorbutick*, at the end of the *voiage*, who, at our firſt ſetting forth, were ſound and *healthy*. And my ſelf of a very ſound body, did bear it out at *Sea*; but preſently after I came a ſhoar, fell deſperatly ſick of a *Feaver*, *Scorbutick Symptoms* being apparent.

Indeed the *Scurvy* may very well be expected at *Sea*, ſince their *drink* commonly is as bad as their *meat*. Water uſually is their *drink*, and not very ſweet ſometimes; that I have often ſtopt my noſe to *drink*. To this is added, *Brandy* and *Tobacco*, both which are *Sea Companions*, and much uſed. Which together, with the ſalt *Beef*, ſalt *Porke* and *Peeſe*, does much alter a good *conſtitution*; and in a ſhort time, makes the *Scurvy* to bud forth and appear.

Next to *meat* and *drink*, *Air* is to be conſidered as an *introducer*, and *promoter* of the *Scurvy*. A groſs, thick *Air.*

and

and moist *Air*, is sufficient to breed the *Scurvy*: And upon this score, some places do naturally produce the *Scurvy*. As your fenny *Marish Lands*, and *Maritime Places*, and *Sea-Air*, especially in the more *Northern Climates*, the *Scurvy* is a constant inhabitant. Now where the *Air* is not so pure, thin, *serene*, and dry, bodyes have not that free *transpiration*, to *ventilate* and purifie the *blood*: The *pores* are more *occluded* and shut up, in a foggy, moist colder *Air*; That the blood is not so well *defecated* by *fermentation*, and the *heterogeneous excrementitious particles* separated and *transmitted*. But being reserved do defile the *blood*, and the *crasis* of some *principle part* perverted: besides, the *Air* being continually suckt and drawn into the body, must needs affect us, with its properties, good or bad.

Hence it is, that people living in different *places*, though dyeting and ordering themselves alike, yet in one place they shall be more inclined, or more *Scorbutick*, than in the other.

Horst. de Morb. Contag. Tract. de Scorb. Which *Greg. Horstius* takes notice of in his dayes. *Verum in eadem Hollandia multo periculosius & frequentius scorbuto*

buto afficiuntur illi, qui Alcmariam, Amſtelodamum, & vicina loca inhabitant; minus vero & rarius qui Gaudam & Roterdamum incolunt, quamvis eodem utuntur victu, ac ſub eodem propemodum climate verſentur. And this, *Ronſeus* alſo obſerved before him: The *temperature* and condition of the *Air* is ſuch, that *diſeaſes* vary and are bred according to its *variation*; and this we *evedently* ſee in the quarterly ſeaſons of the *year*, *diſeaſes* to be intended, remitted or intermitted, to deſiſt at one time, to return at another. And the *Scurvy* we find more active, and more afflicting in *Spring* and *Autumn* then at other times. Whereby we may certainly believe, that the *conſtitution* of the *Air*, in this and that place, makes very much in procuring or keeping off the *Scurvy*.

Hippoc. was very obſervant of this, and left it in caution, as very much to be obſerved by *Phyſicians*. The nature of any place from the *conſtitution* and *diſpoſition* of the *Air*. Diſpoſing to this or that ſickneſs. *Hippoc.* περὶ Ἀέρων, ὑδάτων, τόπων.

A *ſedentary* inactive *life*, diſpoſeth much to the *Scurvy*: As *motion* and *exerciſe* raiſeth the *ſpirits*, and quickens *Sedentary life.*

all

all the *faculties*, keeps nature up in her *vigour* and ſtrength: So *ſlothfulneſs* and eaſe dulls the *ſpirits*, *accumulates* groſs *humors*, obſtructs the body, abates the *acuteneſs* and *vigour* of the *digeſtions*, and *degenerates* the maſs of blood.

Corrumpunt otia corpus, for want of due *action*, the body like ſtanding waters *decayes* and corrupts: natural heat for want of *exerciſe* is abated and *ſuffocated*; *excrementitious* degenerate *humours* abound, the body being thus diſpoſed to a *degenerate* ſtate, the *Scurvy* eaſily ſteps in and takes *poſſeſſion*.

Sleeping and watching.

Immoderate *ſleeping* or *watching*; or unſeaſonably uſed, gives occaſion for the *Scurvy*. For, as moderate *ſleep* refreſheth the *ſpirits*, increaſeth natural *heat*, helps *concoction*, gives ſtrength to the body, gives a relaxation reſpite and eaſe to the tyred ſpirits, and revives nature. So on the contrary immoderate *ſleep* dulls the *ſpirits*, retains *excrements* beyond their due time to be voided, and infects the *body*; whereby the *blood* and *nutritive juices* of the body, become foul and impure, the *ſpirits inactive*, and the *digeſtions* lan-

guid

guid and *deficient:* Hence the *Scurvy* ariſeth and is planted in the body. So likewiſe immoderate *watching* does the ſame, when it *exceeds* the *limits* that nature hath appointed, *tranſgreſſeth* and ſteals away the due time for *ſleep*; the facultyes are *debilitated* and *enervated*, the *ſpirits* tyred, worn out and *impoveriſhed*.

If *ſleep* or *watching* prevails contrary to the *Law* of *Nature*, either is injurious, makes the body to *degenerate* from its natural good *ſtate*, and gives occaſion for the *Scurvy*. Nature is not ſo indifferent in the *inſtitution* of thoſe *ſupports*, that they may be left undone, or done, when and how we pleaſe. As *ſleep* and *watching* are not to exceed in length; ſo are they to begin at ſeaſonable and due times. *Nature* does not allow to *watch* in the *night*, and *ſleep* in the *day*; though poſſibly you may think that ſo many hours *ſleep* in 24, is ſufficient for preſervation of *health*, take it when you will. No, it is not ſo; for at the riſing of the *Sun*, and the light *darting* through the *Air*, the *ſpirits* begin to be more *brisk*, are then fit for *motion* and *action*; but when the *Sun* goes down, and darkneſs covers

vers the *Earth*, the *ſpirits* are more dull and heavy, inclining to *reſt* and *retirement*. Now the more you force and croſſe theſe *intentions*, the more injurious you are to your own preſervation; and *nature* receives prejudice by it.

As *ſleep* is appointed by *nature*, to refreſh the *ſpirits*, and repair loſt *ſtrength*; ſo the time for *ſleep* is appointed and limited, not when you pleaſe: The *ſun* was not made for you to *ſleep* by; nor the *night* for *labour* or *ſports* but for *reſt*. Who ſo inverts this *courſe* ſhall receive certain *damage* in his *health*, and the *Scurvy* for his *Companion*. *Night watching* and *late* ſitting up, tyres and waſts the *animal ſpirits*, keeping them too long upon *duty*, *debilitates nature*, changeth the freſh flower of *youth*, heats and dryes the *body*; in time extinguiſheth natural *heat*, breeds *rheums* and *crudityes*, and moſt *injurious* to thin lean bodyes.

Evacuations. All immoderate *excretions* and *evacuations* may, and do procure the *Scurvy*: So likewiſe neceſſary *evacuations* ſuppreſſed do the ſame. Excremental *evacuations* are various; proceeding from the ſeveral *offices* of *digeſtion*; conveyed out by ſeveral *channels*, and *vents*;

vents; which duly evacuated are no ſmall help to the *conſervation* of *health*, and are the effects of a temperate and regular *body*. The retention of them beyond due time, argue a *dyſcraſy* of *parts*, or irregular and intemperate living.

Seaſonable and moderate *venus*, alleviates *nature*: but immoderate *exhauſts* the *ſtrength* by *effuſion* of *ſpirits*, exſiccates and dries the *body*, hurts the brain and *nervs*, dulls the *ſight*, debilitates all the *faculties*, is a great *procurer* and *promoter* of the *Scurvy*. For all debilities and decayes of nature, gives advantage to the *Scurvy*.

Paſſions of mind.

Man conſiſts of *ſoul* and *body*. The firſt more noble and *active*; the ſecond inferior and *paſſive*. The firſt *rules* and *governs*; the ſecond is fit and ready to receive and *obey* theſe *impulſes*. *Health* is the *integrity* and *perfection* of their conjunct *operations*; *ſickneſs* puts them by the *integrity* of their *actions* and their *performance* is depraved, deficient, or altogether fruſtrate and impeded.

Sickneſs ariſeth ſometimes from the *fragi-*

fragility and *dyscrasy* of the body; sometimes a *sound body* is diseased, by a *distempered mind*. The *soul* and *body* are so linked & conjoyned in *partnership*, that the *disorder* or *decay* of the one, redounds to the *prejudice* & *discomposure* of the other. A diseased *body* takes of, and abates the *activity* of the *soul*; and a disturbed *passionate mind*, makes a youthful healthy *body*, to decay and languish. To shew you how *diseases*, in every part and *faculty* of the *body*, are promoted, and many introduced, by the *discrasy*, *oppression* and *disturbance* of the *mind*; would draw out this part of our Discourse beyond the *limits*. 'Tis sufficient at present that you understand, the *energy* and power of the *soul*, to be *principal* in every *faculty* and part of the body, destinyed for any *office* or *operation*; so that the *discomposure* and *alienation* of the soul, or *suspension* of *vigour*, must cause every faculty or *office* of the body, to be depraved or deficient: in particular, *melancholly* or *sadness*, is a *depression* of the *soul*, and *suspension* (in part) of its *emanative influence* into all the parts and *functions* of the body: The *spirits* which are the Soul's approximate

in-

instruments, are then called of their *dutyes*, at least abated in their power and strength. Which if so, as most true it is; then *digestion*, *separation*, *distribution*, *excretion*, *retention*, *assimilation*, *sensation*, &c. all the actions and operations of the body, vital and sensitive, are hereby depraved and weakly performed: Let melancholy and sadness possess a man, how does he whither change and alter? The soul contracting and shrinking up, withdraws her power and vertue from all the *parts*; so that no *function* is performed *vigorously*, but faintly and deficiently; So that of necessity the *man* must pine away and *languish*. *Melancholy.*

The appetite now is not so craving, nor *digestion* so good: *Sanguification* is now degenerate and vitiate; from a deficiency of *fermentation*, and the *heart* labours to transmit and give passage to the *vital stream*: Every faculty now has a clog upon it, and all the *functions* are heavily performed.

From hence, which I might amplifie much more, you may easily perceive how by this *passion* of *melancholy* the *Scurvy* is introduced, and gains footing in all parts of the *body*. Every function

and office is depraved, the *blood* and *nervous* succus degenerate from their *purity*; and change into a *Scorbutick impurity* and *feculency*. These liquors whereas before they had a balsamick and equal crasis of parts; are now separated, and exalted unduly, and become saline, acrid, or acid &c.

As *Melancholy*, grief and *sadness* in a higher degree, produceth these effects; so a studious, and serious *contemplative life* tends the same way, but more slowly and remissly. What *melancholy* and grief shall effect, after this manner, in a short time; the same *inconveniencies* in a longer and continued *series* and course of a close *students life*, or multiplicity of business, will be wrought in the body. As a *caution* therefore to great *students*, and those that overcharge themselves with *affairs* and business, take this advice, which elsewhere, I have set down in another work.

A studious life.

Tutela sanitatis.

A *cogitative* or *contemplative* person too intent, always or unseasonably employing the *mind* seriously and eagerly either in real or *fictitious* matters, *fabricating idea's* upon the *spirits*, disturbs and hinders other necessary

Caution to studious contemplative men.

offices

offices and operations conſervative of being; *enervats* and weakens their *performance* in duty, impairs *health*, and haſtens old *age*: but thoſe that live moſt *incurious*, and void of ſtudious thoughts and *ſerious cogitations*, preſerve the ſtrength of nature and *integrity* of all the *facultyes*, protract the *verdure* and beauty of youth much longer from *declenſions* and decay; for by how much the *rational faculty* is over-buſy, & *intempeſtively* exerciſed, drawing the full *vigour* of the *ſoul* into the exerciſe of that *faculty*, and robbing other inferior *faculties* of their neceſſary *influential ſupply*, and *emanative* power from the *ſoul*; by ſo much the other *faculties* are impoveriſhed and abated, their *executions* grow languid and depraved; and therefore it is a cloſe *ſtudents life*, or intangled with too much *buſineſs* (eſpecially ſedentary) diſpoſeth and inclines to the *Scurvy*, (which is a concurſe and *complication* of *infirmities*) *enervates* and debilitates *nature*, abbreviates and ſhortens its *courſe*.

Feavers and chronick diſeaſes.

Feavers and long ſickneſs are procuring cauſes of the *Scurvy*. How *feavers* and *chronic* diſeaſes terminate

in and leave a *Scurvy* behind them, as their *product*, we will inquire into the matter. Scarce any ſickneſs but affects ſome *principal part* more or leſs, to alter and change from its natural *craſis*, and good *diſpoſition*. Now an *evil diſpoſition* of parts, whether *innate* or *advenient*, is reckoned in the number of *primitive* and procuring *cauſes* of the *Scurvy*. Eſpecially if it be ſome principal part, as the *Stomack* or *Spleen*; their *diſcraſy* will ſoon appear to a general *detriment* of the whole: Theſe parts being perverted by a long waſting *diſeaſe*; or more ſudainly by an *acute* and fierce ſickneſs: They being *alienated* in their office and dutyes, a *Scorbutick impurity* is generated, inſtead of laudable good blood and nutritive *juices*.

In *feavers* by the preternatural *æſtuation* and inquietude of the *ſpirits*, they are waſted and conſumed ſo, that the blood is left *diſpirited*, flat and impoveriſhed, changing its *balſamick ſtate*, into a ſaline, acrid, or *acid ſeroſity*.

And whereas the ſaline *particles* of *blood*, being in union with the ſpirits were purely *volatile*, dulcid, and *balſamick*

ſamick; are now upon the *ſpirits deſertion*, grown fixed and *embodyed*, reſiſting *fermentation* and *circulation*, ſubſiding, and afflicting ſeveral parts by their *acrimony*. Hence pains in divers parts; contractions and *convulſive* motions ſometime, affecting the *nervous* and *membranous* parts.

To make theſe *diſeaſes* more pernicious in their *conſequents*, and that they may be ſure to leave a *Scurvy* behind them. The *mode* of curing by repeated *phlebotomies*, contributes to the ſetting on and advance of the *Scurvy*: But this point is controverted elſe where in this work, therefore I forbear the proſecution here. Only this you may obſerve, as I have obſerved it often; that thoſe which have been bled much in the *cure* of *Feavers*, are much longer in *recovering* their ſtrength, and with more difficulty raſe out the *veſtigia* of their *ſickneſs*. And commonly a *Scorbutick Conſumption* is the conſequent, from ſuch erroneous methods, and Medicines in the cure of *Feavers*; and cures or rather palliations of other diſeaſes, greater occaſions are given for the *Scurvy* to take place, which otherwiſe might be prevented

by a more *rational courſe*, and *effectual Medicines*.

Fluxes of blood. Large *hæmorrhages* or fluxes of *blood*, are accounted by ſome to be a procuring cauſe of the *Scurvy*; And not undeſervedly. So likewiſe immoderate *Venus*; both which make a great *exhauſtion* of ſpirits, and impoveriſheth nature; in which low eſtate, the *Scurvy* hath a fit opportunity to take *radication* in the body.

Venus.

Tobacco.

Another *grand* procuring and *promoting cauſe* of the *Scurvy* is, *Tobacco*; not taken notice of by any that I meet with in print. And here we may charge much of the frequency, and the unwonted phænomena or ſymptomatical appearance of this *diſeaſe*, upon the late cuſtome of taking *Tobacco*. Many wonder that the *Scurvy* ſhould ſo much abonnd now in moſt places, to become ſo common and obvious now to every eye, that was ſo rarely taken notice in former times, notwithſtanding ſome of its *procuring* cauſes were very *antique*. But we need not wonder ſo much, if we conſider the manner

of

of living in former ages compared with our own; new *customes* and *dyets* beget new *diseases*, or *modefie* the old so, as they seem to be new, in their unwonted manner, or frequency of *appearance*.

The *Scurvy* being altered and *differenced* now from what it was in ancient times, that the *phænomena* or *symptoms* of the disease in the syndrome and *concurrence* is not *exact* alike with the *description* of the *ancients*; which hath caused a *doubt*, and it is held by some *Physicians*, that the *Scurvy* is a new *disease*: But it is the old *Scurvy* dressed in a new *garb*, which by new *procuring-causes*, and additional *complications*, is become more depraved, more frequent, and more enlarged: few persons but *harbour* this unwelcome *guest*.

As an *additional* procurer and great *aggravator* of the *Scurvy*, *Tobacco* comes now to be examined; since whose general use the *Scurvy* hath much increased, and is become the most *epidemical*. That this *plant* is injurious and destructive to *nature*, and consequently an *introducer* of the *Scurvy*, will appear if we consider the

effects that *ſupervene* and follow the taking of it. The conſequents or *effects* may be divided into two ſorts: Firſt ſuch as accompany or *ſupervene* the firſt uſe of it: Secondly, ſuch as follow the long and conſtant uſe of it.

Symptoms ariſing upon the firſt and unaccuſtomed uſe of ſmoaking it, are *vomiting*, *giddineſs*, *fainting*, *drunkenneſs*, *ſleepineſs*, *depravation* of the ſenſes, and ſuch like as follow upon the taking of ſome kind of *poyſons*.

Effects upon the accuſtomed familiar uſe of it are, *Salivation*, drawing a *flux* of *moiſture* to the mouth, and draining the *body*; *heat*, *drineſs*, *laſſitude* and *wearineſs* of the *ſpirits*, a *dullneſs* and *indiſpoſition* of *mind* after; apt to *ſleep*, a filthy *unſavory taſt* in the mouth, a check to the *ſtomack* or *appetite*.

The latent, and more ſecret effects wrought in the body by the conſtant ſmoaking of *Tobacco* is, the inducing a *Scorbutick diſpoſition*, or great promoter where it is already *radicated*. And this is procured theſe wayes: Firſt by *depreſſing* the *ſpirits*, and *alienating* them

them from their *genuine propriety* and purity. Secondly, by vitiating the *ſtomack*, and depraving the *palate*. Thirdly, by *exhauſting* the dulcid good juce of the body, leaving behind and procuring the remainder more *viſcous acrid* and *ſharp*. Fourthly, by *prejudicing* and weakning the lungs and *vital parts*.

That it hath a property to depreſſe and clog the *ſpirits*, is apparent by its *narcotick virtue*, cauſing a dulneſs, heavineſs, laſſitude, and diſpoſing to ſleep after the uſe of it. That it *alienates* the *ſpirits* is concluded from its *virulent nature*, and diſcord with our *nature*; and that is *argued* from the *ſymptoms* that attend the firſt uſe.

That it is noxious to the ſtomack, (the firſt *grand laboratory* of the body) is *rational* to *aſſert*: For, as *Tobacco* affects the *mouth* with an ill ſtinking taſte, ſo the *ſtomack* alſo goes not free, but is tainted with it; which is communicated to the food received. Now conſidering the nature of *Tobacco* as it is; hot and dry, acrid, ſalt, biting, purgative or rather *virulent*, altogether *medicinal* and not *alimental*; and this conſtantly to *impregnate* and *tincture* our

our *nutrimental* ſuccus with theſe *properties* and qualities; we cannot otherwiſe expect by length of time and daily uſe, but that it will ſhew its power and vertue to change and alter our *bodyes*, ſince it is not *nutritive* but *medicinal*; *eſtranged* and at a great diſtance, from the *nature* of our bodies, not fit to nouriſh but to alter and produce ſome notable *effects*.

So great a *ſympathy* there is between the *ſtomack* and *mouth*, that the one is not affected, but the other is drawn into *conſent*: If the *ſtomack* be foul, the *mouth* hath an ill reliſh: And if the *mouth* diſtaſts any thing, the *ſtomack* *nauſeats* at it: Now this great *harmony* and conſent between theſe two, ariſeth upon this account; the *mouth* is appointed by nature, the *ſtomack's taſter* to judg and diſcern what is fit and agreeable for the *ſtomack* to receive; and therefore the ſame *membrane* which inveſts the *mouth* and is the *inſtrument* of taſting does alſo line the *ſtomack*; ſo that hereby what is *pleaſant* and *acceptable* in the *mouth*, is gratefully received into the *ſtomack*: now by this affinity and ſympathy, you may rationally conclude, that *vitiating* of the taſte by

Tobacco,

Tobacco, and tainting the *mouth* with its ſtinking ſcent, muſt of neceſſity communicate the ſame to the *ſtomack*, which takes phyſick every time you take *Tobacco*; does mix with and infect the *chyle* of the *ſtomack*, and is *conveighed* with it into all parts of the body: And having ſo great a *medicinal* power, muſt needs alter and change the body, according to the properties it is *endowed* with, by the conſtant uſe and dayly reception of it.

Now *Tobacco* being of an acrimonious, hot, dry, &c. nature, does pervert and change the *balſamick juices* of the body into a more ſharp and fiery temper, and *alienate* them, whereby they are not ſo *amicable* and fit for *nutrition*, as many *Scorbutick Tobacconiſts* do evidence upon examination, and their *conſtitution* changed by the evil uſe of this *plant*; and it is very reaſonable to expect it and impute ſuch *alterations* to the uſe hereof, ſince they are the proper *effects* of ſuch a *cauſe*. The more remarkable diſcovery and frequency of the *Scurvy*, may well and juſtly be imputed to *Tobacco*, ſince of latter years that *Tobacco* hath been in uſe, and in thoſe *Countryes*, where

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Tobacco is much taken, it does abound moſt.

Although I diſcommend the uſe of *Tobacco* by ſmoaking it as an *injurious cuſtome*, yet I highly applaud it as very *medicinal* being rightly uſed. I remember about 15. years ſince, a patient of mine in *Darbiſhire*, fell into a great *paroxyſm* of an *aſthma*, almoſt to *ſuffocation*; I exhibited a doſe of the ſyrup of *Tobacco*, Which gave him preſent help, and within a few hours was relieved, that he could draw his breath with much eaſe and freedom. And about a year after, at *Maxfiled* in *Cheſhire*, I cured a Gentlewoman of an *Vlcer* in *ano* of 7 years ſtanding, chiefly with the ointment of *Tobacco*; and although other things were uſed yet I *aſcribe* moſt of the cure to that *unguent*. And in many other caſes *Tobacco* is of good uſe; which I have experienced. But ſmoaking of it I find to be hurtful, if it be *cuſtomary*. I ſhall not be ſo ſtrict and ſevere againſt the uſe of it, as to forbid all perſons the ſmoaking it upon any ſcore whatever; for that which may be uſed at certain times as *medicinal* upon juſt occaſions requiring, in ſome *perſons*; may prove very bad and per-

pernicious upon the conſtant and *general uſe*. And this is the caſe of *Tobacco*.

Tobacconiſts, whom cuſtome hath enſnared and brought them to delight in it, are willing to be perſwaded and deluded, that it is good and wholeſome, at leaſt harmleſs. The pretences which they urge in *defence* of it, are ſuch as theſe: ſome plead for it, and uſe it after *meat* as a help to *digeſtion*, and therefore take it as a good remedy againſt a bad *ſtomack* and weak *digeſtion*.

To this I anſwer: They are much miſtaken herein; not diſtinguiſhing between *digeſtion* and *precipitation* of meat out of the *ſtomack*: *digeſtion* is not performed but in due time; by *retexture*, *alteration*, *fermentation* and *volatization* of meat, and till then is not fit to paſs out of the *digeſtive office*, which requires ſome hours more or leſs, according to the nature of the food received, of *facil* or *difficil digeſtion*: now that which provokes the *ſtomack* to a *diſtribution* of *ſemi-digeſted chyle*, and unloading it ſelf before *digeſtion* be finiſhed and perfected, offers great injury to the *body*, (and this is the caſe of

of *Tobacco* by its *laxative ſtimulating properties*) which error committed in the firſt digeſtive office, is not corrected nor the damage recompenced by the acuteneſs and ſtrong *elaborations* of the ſubſequent *digeſtions*: and for this reaſon in part, the *Scurvy* is procured hereby.

Aphoriſm.

Some take *Tobacco* for refreſhment after labour, and *divertiſement* of *ſerious thoughts* being tyred with *buſineſs*, *ſtudy*, and *muſing*. True it is, *Tobacco* puts a *ſuſpenſion* upon ſerious thoughts, and gives a *relaxation* for a time in ſome perſons: others *contemplate* and run over their buſineſs with more delight by the help & during the taking of a pipe: But both theſe perſons though ſeemingly *delighted* and *refreſhed* for a ſhort time; yet afterwards the *ſpirits* are *laſſated* and tyred, they are more *flat*, *dull* and *ſomnolent*, when the pipe is out; this was but a *cheat*, the *ſpirits* was not truly *refreſhed invigorated* and *re-inforced*, as wine does enliven and make brisk the *ſpirits* by affording and *communicating* an *additional ſupply*; but by the fume of *Tobacco* the ſpirits are a little *inebriated*, and *agitated* by another motion than their own, which is a

ſeem-

ſeeming *refreſhment* and ſhort, not real *ſubſtantial* and laſting.

Others plead for *Tobacco* and take it as a remedy againſt *rheums*, becauſe a great *dryer*, and *exhauſter* of ſuperfluous moiſture. To evince the error of this *opinion*, conſider what is the cauſe whereby *rheumes* and *crude moiſture* in the body do abound; and then you will plainly ſee, whether ſmoaking *Tobacco* be a proper and likely *remedy* to prevent or oppoſe it. *Phlegm* and *ſuperfluous* moiſture does ariſe and abound in the body from a *deficiency* and *debility* of the *digeſtions*; as alſo impedement or *impotency* of the *expulſive faculty*, that the remainders after *digeſtion* be not *tranſmitted* by the common *ductures*. Now this fume of *Tobacco* gives no *roboration*, adds no *ſtrength* to the *digeſtive faculties* having no *ſymbolical* qualities to comply with, and aſſiſt them, is very plain. Alſo that *ſeparation* and *expulſion* of ſuperfluous moiſture by this fume, is not promoted and *tranſmitted* through the more commodious *ductures* and paſſages appointed by nature for emiſſion; only a *ſalivation* by the mouth is procured,

cured, which brings no *advantage* but *detriment*; for, this flux of moiſture does not ariſe as *critical*, from the *impulſion* of *nature* ſeparating and *protruding*; but from a *promiſcuous attraction* of *fluid* moiſture (by vertne of its *acrimonious heat*) as well the laudable *util* ſuccus, as the *degenerated* and *ſuperfluous*: So that conſtantly draining the body of this dulcid ſeroſity, muſt cauſe many *inconveniencies* through the want of it, in as much as it is very ſerviceable to the body, in the integrity of its nature; but being *alienated*, is changed, or vented by better means, nature concurring with the *medicine*. But admit this did attract only *excrementitious moiſture* (which it does not) yet conſidering it *vitiates* the *ſtomack*, and *impregnates* the *chyle* with its evil *properties*, 'tis much better to forbear than to uſe it; that *benefit* would not *recompenſe* this *injury*: And further; that which is a preventing or *curative remedy* of ſuperfluous moiſture, rheum, or phlegmatique matter, applyes a *priori* to the *digeſtions*, the *ſprings* from whence ſuch effects do ariſe; not a poſteriori to the *producted* matter, which this fume ſeems to pump

out;

out, but does not ſtop the *leak*; is no *radical Medicine*: and therefore, they that ſmoak *Tobacco* upon this account, as a great dryer, an *exhauſter* of *ſuperfluous moiſture*, are much deceived in the expected *benefit*; it only brings a current of *moiſture*, which ought to be expended otherwiſe; but it abates nothing in the *Fountain*, or *Springs*; rather *augments* and makes an overflow, (for the reaſons aforeſaid) as *Tobacconiſts* do evidence by their much ſpitting.

Some may ſay; I never took *Tobacco*, and yet I have the *Symptoms* of the *Scurvy* as bad as any, that have taken it. *Obj.*

This may be ſo; from other great *procuring cauſes*; and yet *Tobacco* not withſtanding may be one great *procurer* in other perſons. The *Scurvy* does not require all the procuring cauſes to concurr in its production; but ſometimes one, and ſometimes another is able to do it: and although you take no *Tobacco*, yet perhaps your *Parents* did, or theirs; and is ſufficient to make you fare the worſe: bad cuſtoms and abuſive living, extends farther than the *perſon* ſo offending; it is *tranſmitted* *Anſ.*

to their *off-ſpring*, as in another work I have noted in theſe words. *But yet, the crime were leſs if only to themſelves the prejudice did extend, but alſo to poſterity their diſeaſes are propagated; the Children having impreſſed upon them, and radicated in the principles of their nature, the ſeminal power and productive vertue of inordinate and intemperate living of their genitors and progenitors; that the children may bear witneſs to the following age, the vice and folly of their parents and prædeceſſors, recorded and characteriſed in them.* &c.

Tutela ſanitatis.

Hereby you may underſtand that evil cuſtoms (as of ſmoaking *Tobacco*) does not injure only the *perſon* doing ſo; but the *generation* after them are *prejudiced*. And here, by the way, we may take notice of the many *rickity*-children in this latter age, ſince the uſe of *Tobacco*, which diſeaſe was not known before the frequent uſe of it: *Tobacco* does *enervate* and *debilitate* the *faculties*, that we may rationally expect the *children* from this generation to be *Scorbutick*, *Rickity*, and more feeble than formerly.

Amurath. *Amurath* the Fourth of that name, *Grand Senior* of the *Turkiſh Empire*;

pus

put forth his *edict* againſt the ſmoaking of *Tobacco*, and made it a *capital crime* for any that ſhould ſo uſe it: the reaſon of this *ſevere prohibition* was, that it did render his people *infertile*. I ſhall not urge the inconvenience of *Tobacco* ſo far; but this I may *aſſert*, that it cauſeth an unfirm *generation*, by *debilitating* the *parents*, and rendring them *Scorbutick*; which *impreſſions* are carried in *ſemine* to their children, and makes a diſeaſed *iſſue*. And I obſerved in *Virginia*, being ſome time in that *Colony*, that the *planters* who had lived long there, being great *ſmoakers*, were of a withered decayed *countenance*, and very *Scorbutick*, being exhauſted by this immoderate *fume*; nor are they long lived, but do ſhorten their dayes by the intemperate uſe of *Tobacco* and *Brandy*.

King James, that learned philoſophical *Prince* of this *Nation*, wiſely conſidering the nature of this *plant*, and having a good *ſtoxaſtick* head to foreſee the inconveniencies that would ariſe to his *people*, by the ill cuſtome of *ſmoaking* it; he being the great *Phyſitian* of the *body politick*, does excellently dehort his *ſubjects* (being tender *King James.*

of their future wel-fare) from this noxious *fume*, and writes an *Invective* againſt it: whoſe *oratory* and ſolid *arguments* were enough to have broken the neck of this *cuſtome*, had they any regard to his *kindneſs*, or ſenſe of their *own good* and of their *poſterity*.

His counter blaſt to Tobacco.

I might have enlarged my ſelf upon this *ſubject* and run over moſt *Scorbutick ſymptoms*, ſhewing how they are either firſt procured or aggravated by this *fume*: but from what hath been ſaid already it plainly appears that *Tobacco* is a great procurer and promoter of the *Scurvy*, in as much as many *Scorbutick Symptoms*, are the proper effects of ſmoaking *Tobacco*. As laſſitude, dullneſs, ſomnolency, ſpitting, ill taſt in the mouth, &c. And although ſome few perſons, either by the ſtrength of nature do ſtrongly reſiſt the bad *impreſſions*, it ſets upon ſeveral *parts* of the body; or by the *peculiarity* of *nature* is leſs offenſive and hurtful to ſome; or brings ſome particular *benefit* (amongſt its many ill *properties*) that makes it ſeemingly good; yet inſenſibly and by time it *damageth* all; and thoſe few good *effects* in ſome few perſons, are not of validity to give it a general

general *approbation* and uſe, and free it from the cenſure of a great *procurer* of the *Scurvy*, but may juſtly be reckoned in that *catalogue*.

CHAP. VII.

Examination of Opinions concerning the nature of the Scurvy.

BEfore I *explicate* the nature, *quiddity*, or *eſſence* of this *Protean* Diſeaſe, I ſhall firſt *recite* the judgments and determinations of the moſt learned and *eminent Phyſicians* that have writ upon this *Subject*, to whom the moſt of our age do *adhere*, and imitate their *practice* in the *Cure*. *Sennertus* gives this *definition* or *deſcription* of it.

Scorbutus eſt prava & occulta qualitas, ſeu diſpoſitio, toti corpori, præcipue vero viſceribus nutritioni dicatis impreſſa, ab humore melancholico craſſo, ſeroſo ſeu chloroſo, peculiari modo corrupto orta; cum ſpontaneæ laſſitudinis & Senertus.

gravitatis, in cruribus præcipue, ſenſus pectoris anguſtia & reſpirationis difficultate, gingivarum corruptione & oris graveolentia, ac maculis purpureis in cruribus inprimis, aliiſque morbis, ac ſymptomatibus plurimis ab eadem cauſa pendentibus, conjuncta. The *Scurvy*,

It is an evil *occult quality*, or diſpoſition, *impreſſed* upon the whole body, chiefly the *Parts deſtinated* for *nutrition*, ariſing from a groſs *melancholy*, or *ſerous ichorous* humour, after a peculiar manner corrupted, with *laſſitude* and *heavineſs*, *&c.*

This *Definition* looks imperfect and unſatisfactory, although from a worthy *Author*.

An evil occult Quality.] That gives us no ſatisfaction, in as much as it is acknowledged to be *occult* and unknown. Nor does *Quality* (if it were known) fitly expreſſe and ſetforth, the nature or *eſſence* of the *diſeaſe*, being *ſeminal*, *productive* and *ſubſtantial*, having root in the principles of nature: But the following words are more obſerveable. *Impreſſed upon the whole body, but chiefly the parts deſtinated for nutrition.*] The *Scurvy* though *communicated* to the whole body, and all parts may be

tainted

tainted with it; yet the *principal* parts ſerving for *nutition*, being perverted in their offices, are the ſprings that feed and maintain it: And until ſome of theſe be *alienated* and *ſeduced*, the *Scurvy* is ſcarce ſaid to be *radicated* in the body, for theſe ſtanding firm, nature is maintained and kept up; and although by bad *diæteticks*, the body may have injury offered, yet until the *digeſtive* offices, by frequency and cuſtome be *depraved* and *conſent*, the other ſlight *impreſſions* is ſoon raſed out, and nature by her own ſtrength does purifie the body, ſo long as the vigour of the *principal parts* remain in integrity.

But this impreſſion, he ſaith, *ariſeth from a groſſe melancholy, or ſerous ichorous humor.*] To me it ſeems more reaſonable, that this *groſſe melancholly* or *ſerous ichorous humor*, when any ſuch depraved humors are in the body, are rather *effects* and *products* of the *Scurvy* than the *cauſe*: For there may be a *Scorbutick impreſſion*, upon the parts, and the *Scurvy* may *exiſt*, long before any ſuch humour be generated: And examine all the *procatarctick* and primitive *cauſes* of the *Scurvy*, you may per-

ceive their influence and power discharged upon those parts where no such humor is *generated*; and therefore cannot be the *antecedent internal cause* as generally laid down in this *definition*: But when such a depraved humor is generated in the body, we may say more properly then, the *Scurvy* is in *facto esse*, not *in fieri*; for it hath taken root and produceth this *effect*. Now as this depraved *humour* does not rest in one place, but is *communicated* and conveighed from one part to another by *circulation*, altering and changing those parts with its evil *properties*, and producing new *symptoms*; here is a *gradual progress* of the *Scurvy*, it does now spread and enlarge its *quarters*; and this humor which is *causa conjuncta Scorbuti*, may be *causa antecedens* in respect of those parts it does *pervert* and *infect* afterwards.

Eckius, in his *Epitome* of the *Scorbute*, describes it thus.

Scorbutus est morbus Splenis, aliquando obstructi, aliquando intemperati, aliquando cum incipiente Scirro, qui præpedit ejus attractio, nem, ac consuetam atribilariæ redundantiæ sequestrationem, ex hepate venisque, eoque humore universum

corpus

corpus vitiat, ſed peculiariter craſſiore fæculentia crura contaminat, atque evaporanda acredine gingivas inficit.

He ſaith, the *Scurvy* is a Diſeaſe of the *Spleen*, obſtructed, diſtempered, or hardened, which hinders the *attraction* and ſeparation of abounding *Melancholy* from the *Liver* and *Veins*; by which *humour* the whole body is vitiated, the groſſer part *affecting* the thighs, the thinner *acrid* part the *gums*.

A Diſeaſe of the Spleen obſtructed, diſtempered or heardened.] Here the *eſſence* of the *Diſeaſe* is ſet forth and defined, *per effectus ſeparabiles a morbo*; by *effects* which may, or may not be, and the *Scorbute* in being: and it is improper to *define* a thing *eſſentially*, by effects which are but reſults *a poſteriori* and ſeparable; and that which is an *effect* cannot be *conſtitutive*, the *ratio formalis* of the thing from which it doth proceed.

Which hinders the attraction and ſeparation of abounding Melancholly.] Here the *Spleen* is ſuppoſed a place of *reception* and *ſink*, to drain away excrementitious *Melancholly* from the *Liver* and *Veins*; an inferiour Office for

ſo

ſo noble a Part; nor is it *fabricated* or *ſituate* conveniently for ſuch a uſe; having no ample *cavity* for reception, nor a fit paſſage for *emiſſion* of ſuch an excrement, being *intertexed* variouſly with ſmall veſſels, having *inſertions* into each other, and doors of *communication*, argues a place of *elaboration*, and *grand* affair, not a draught or ſink for venting an *excrementitious humor*: If it had been deſtinated for ſo mean ſervice, why was it contrived with ſo many *arteries*? that no other Part is furniſh'd like it, but that it was appointed for higher *purpoſes* and *deſigns*, and therefore is plentifully ſtock'd and enriched with *vital ſpirits*.

Brunerus. *Brunerus* in his *Tract* of the *Scurvy* deſcribes it thus. *Proprie hic morbus eſt affectio Lienis, in quo a cervato & leviter putrefacto humore melancholico, qui a ſanguine ſeparatus ad lienem tranſmittitur, pars tenuior ſeu effervеſcens, effertur ſurſum & obſidet gingivas, tanquam tenerrimas oris partes, & putredini maxime obnoxias, eaſq; inficit & erodit, imo etiam emollit: craſſior decumbit ad crura*——— He ſaith, this diſeaſe properly is an effect of the *Spleen*, in which a *putrid melancholly humor*

humor is accumulated, ſeparated from the blood, and tranſmitted thither.

He makes the *Spleen* to be *ſedes morbi*, the part *primarily* affected, and yet the *peccant humour* is only tranſmitted thither; and ſo it is but a part *recipient*, as other parts of the body are; *pars infeſta*, not *primario affecta*, from whence it doth ariſe.

Nor is this diſeaſe alwayes ſeated in the *Spleen*, though very often it hath its chief *reſidence* there; but it may be *radicated* in other parts, and the *ſpleen* diſcharge its *office* well; where the *primitive cauſes* of the *Scurvy* make *impreſſion*, there is a foundation laid: Now examine thoſe *cauſes*, you will find their *influence* diſcharged upon other parts, and not the *ſpleen* only, or *primarily* injured, but other parts ſometimes, are firſt *diſcraſyed*, and lay the foundation of this *diſeaſe*, and therefore not properly called the diſeaſe of the *Spleen* without any *exception* or *limitation*. As for the *material conjunct cauſe*, which he aſſignes to be a *melancholly putrid humour*; that I have diſcuſſed, in another place following, and ſhewed the *error* of that *opinion*.

The

The thinner part is carried upwards, and infects the Gums; the groſſer ſettles downwards, and affects the Thighs.] This diſtinction of thicker and thinner parts is needleſs; for that *degenerate Scorbutick* diſpoſition of the *Stomack*, whether the depraved matter lodged there be thick or thin, it will affect the *mouth* and *gums*, becauſe the ſtomack and mouth have one *membrane* lining both the parts; and therefore when the *ſtomack* is foul, the *mouth* hath a bad reliſh, and an unſavory taſte, (which is moſt perceived in a morning after digeſtion is paſt;) and let any diſguſtful thing come into the *mouth*, the *ſtomack* nauſeats preſently, and is ready to *vomit*, although it be not ſwallowed down; and this is by reaſon that the *mouth* and *ſtomack* have one membrane inveſting both the parts, that the one cannot be affected, but the other immediately *conſents* and *participates*, by reaſon of the *continuity* of the *membrane*; which is more or leſs manifeſt according to the greatneſs of the *cauſe*: So that thickneſs or thinneſs of the matter is not to be taken notice of, but the effects the ſame be it thick or thin.

And

And for that he ſaith, the groſſer part affects the thighs, the reaſon is as light as the former, though not to be *refelled* by the ſame *Argument*: I ſhall not anticipate my intentions in another place, but refer you to a future opportunity in the diſcourſe following, where this point is cleared.

Eugalenus, in his Book of the *Scurvy*, treats largely of this *diſeaſe*, in whoſe foot-ſteps moſt *Writers* ſince have trod, or diſgreſſing but a little from his *Opinions*, have relied on him as the beſt guide in tracing this *Diſeaſe*. *Eugalenus.*

His *Obſervations* are many in his own *Practiſe*, upon ſeveral perſons variouſly afflicted with this *diſeaſe*, and brings in ſeveral infirmities complicated with it, worth your reading.

Notwithſtanding the *baſis* and foundation that he layes, whereon he makes this *diſeaſe* to be founded, is not firm; and that is, *Humoris Melancholici exuberantia*, abounding *Melancholy*: to which ſomething hath been ſaid already that I ſhall not repeat, and more to be ſaid in another place, in ſatisfaction to this error.

And in his *Determination* of the *internal cauſe* and generation of the

Scurvy,

Scurvy, he delivers his judgment in ambiguous wavering terms, not *positively* and *resolvedly*; but with some kind of *dissatisfaction* and uncertainty: his words are these.

Interna hujus morbi causa, Melancholici humoris exuberantia censetur, ex jam dicta vitæ victusque (scilicet inordinati) ratione acquisita: qui circa lienem & hepar, vel intermediis inter hæc & ventriculum spatiis, vel in ipsis etiam venis, quod puto, coacervatus; propriam & huic morbo familiarem corruptionis formam subit, qua adjacentia, vicinaque viscera, sua vel substantia, & contactu, vel qualitate & fumis depravat, naturalem eorum temperiem corrumpendo, donec in contagii communionem consentiant: Where you may observe by *censetur, vel, puto*, his Determination with *hæsitation* and uncertainty.

In finding out the *Scurvy*; for his *Diagnostick* signs, the *Pulse* and *Urine* are his two great discoverers; that in most of his *Observations* the one or both confirms his *Opinion*, and relies upon their *signification*: both which are very uncertain; for, there is no particular *Pulse* or *Urine* peculiar to this Disease, but almost all Pulses and Urines may

may be in *Scorbutick* persons, as most Diseases may be complicated with it: and therefore their judgment is very fallible and uncertain that depend on these signs.

Others there are who have written *Tracts* of this disease, as *Ronsseus*, *Wierus*, *Sal. Albertus*, *Martinus*; whose Judgments and *Opinions* are involved and agree in the main, with those already recited; that I need not spend time in examining them apart: nor have I recounted their failings, intending their dishonour (whose names I think worthy of memory, for their *Learning* and *Labours* in the *Medicinal Faculty*) *humanum est errare*: but that it is the duty of every one, to examine the *Principles* and *Tenents* of our *Predecessors*, and not subscribe to the *Authority* of any, when a clearer light of Reason, confirmed by *Experiments* and due *Observation*, commands a *recession* from their *Opinions* or *Practice*.

Amicus Eugalenus, amicus Sennertus;
sed magis amica Veritas.

Since

Since my undertaking to examine the *opinions* of the beſt *Authors* concerning this *diſeaſe*, to view their ſeveral *deſcriptions*, *diagnoſticks prognoſticks cauſes*, *therapeuticks*, and to report my *ſentiment* touching the ſame: Dr. *Willis* after this, aſſumes the buſineſs in hopes to give a better account to the World then what had been done before, in laying open this *diſeaſe* according to ſome *hypotheſes* of *fermentation*; and comparing the *degeneration* of the *blood* in *Scorbutick* perſons, with the different ſtate and alterations in *wines*. What farther light, or new diſcovery, this *Learned Author* hath given not noted before, we will take notice of and own it from him; whercin we diſſent, & are otherwiſe perſwaded, we ſhall *diſcuſs* and *traverſe* thoſe *opinions* for my own ſatisfaction, and others that deſire a right underſtanding and true account of the *ſubject* now in hand.

Dr. *Willis*,

This *Author* hath not truſſed up the *Scurvy* in one *definition* or ſhort *deſcription* as former writers have don, by giving a *compendious ſynopſis* and *ſuccinct* judgment of it; therfore I muſt glance my eye through the whole *tract* of his *diſcourſe*, and note the *heads* as I paſs along.

In

In the *front* of that *tract*, ſtands the *nomenclature* of this diſeaſe, mentioned only, but waves obſervation upon it. The *catalogue* of *ſymptoms* given in, are according to *Eugalenus*, and *Sennertus*; but one more is added, *crepitus oſſium*, ſnapping of the bones in the *joynts*, upon bending of any part; and makes mention of one ſo *affected* with this *ſymptom* of the *Scurvy*, that could not be cured. For my own part, I have not had any *patient* that hath complained upon that ſcore, or mentioned it to me. *Tract. de Scorb.* *Note that in pag. 83. l. 25. you muſt read* Stoχaſtick.

In the *enumeration* of *procatarctick* and remote cauſes of the *Scurvy*, this *Author* agrees with former *writers*, and their general opinion in this *point*. *Pag.* 205

Next, the *material cauſe* comes to be ſpoken of; wherein is obſervable the biaſs of his opinion which we are to take notice, as the firſt *conſiderable* (to *diſcuſs* and *examine*) and a *cardinal* point to which much of his diſcourſe referrs to & depends on. And here I muſt *recite* ſome part of his own words. *Ex his* (having named the primitive and occaſional cauſes) *circa Affectionem Scorbuticam obſervandis, manifeſto liquet, materiam* *Tract. de Scorb. pag.* 205.

lem hujus morbi causam, haud in privato quodam loco, aut singulari minera contineri, sed per totum corpus, & singulas ejus partes tum intus, tum extus diffundi: How these words come in, by way of *inference*, or necessary *consequence* from the preceding *enumeration* of *procatarctick* causes, may deserve a *quæry*; but that I pass: 'Tis the words *subjoined* start the controversy. *Unde statim colligere licebit, Miasma Scorbuticum vel in sanguine, vel in succo nervoso, aut simul in utrisque fundari.* Ibidem.

Diffundi and *fundari* stand at a great distance one from the other, and a great difference between them. In the first part of his words, is *asserted*, that the *Scorbutick* matter is not contained in any particular place of the body, but is *diffused* into all the parts, and true it is: but the *illation* from thence, that the *Miasma*, the *Scorbutick* impurity should be *founded* and *radicated* in the *blood* and *nervous juice*, remains to be proved. Although this *degenerate* matter be communicated and conveighed into all the parts, by the *blood* and *nervous juice*; yet here is not the *spring* and *fountain*: These

are

are but the *rivulets* of *propagation* and *diffusion*: that the blood and *nervous juice* is tainted and depraved in *Scorbutick persons*, none I suppose will deny; but that these *liquors* should be the *foundation* and seat of the *disease*, as in the next page also this *Learned Author* hath repeated; I cannot assent unto.

That most *Scorbutick Symptoms* do arise *immediate* from the *blood* and *nervous succus* is very evident. That the *blood* is alienated from its *balsamick nature* and due *crasis*, by heterogeneous admixture and want of defœcation, is certain: witness its inordinate motions and *æstuations*, *spots* and *eruptions* upon the *skin*. From this degenerate and vitiated *stream* the *nerves* are fed with an impure supply; hence by their *male-affectedness*, *debilities*, *pains*, *convulsive motions*, *lassitude* &c. are the *products* and *effects*; but notwithstanding these *symptoms* do immediately *assurge* from the *blood* and *nervous succus*; they are but *propagating* rivulets and *streams* of conveyance through the body, the *radix* of the *disease* is not here; the *Scurvy* is not *founded* in the *blood* and *nervous succus*, they are apt

recipients of *contamination*, not the ground work of *radication*.

That which is the *foundation*, *ſeat* or *ſpring* hath no *precedency* of *origination*, *in eodem genere cauſarum*: but *Scorbutick* mutations of the *blood* and *nervous ſuccus* ariſe from precedent vitiated *digeſtions*, the *ſpring* from whence theſe flow pure or impure. Therefore the *radix* or *ſedes morbi* is in the *digeſtive offices*, the *laboratories* of *tranſmutation*, from whence the *liquors* of the body do come forth well digeſted and pure, or degenerate and imperfect.

2. That there is a *ſaline* and *ſulphurous* part in the *liquors* of the body, as in many other *liquors*; (which their *Chymical analyſis* do teſtifie) that they are *ſaline* and *ſulphureous* intermittingly, and change their *ſtate* according to times and accidents, is moſt reaſonable to imagine: But that the *foundation* of the *Scurvy* ſhould be laid and grounded upon theſe *tranſmutations*, as their *ultimate* and loweſt *baſis* in the body of man, is not apparent to my underſtanding: For as much as a more fixed, preceding and *ſubſtantial groundwork*, is in the *digeſtive offices* the

parents

parents of ſuch *tranſmutations*. The *Scurvy* is not ſeated or *founded* in excrementitious or degenerate *humours*, but *in principiis noſtris*, in the fundamental *principles* of our *nature*. If we could imagine the whole maſs of *blood* to be let out, and the perſon live; yet the *Scurvy* might remain behind: how? In the *dyſcraſy* of *principal parts* perverted from their integrity, and deficient in their vital *operations*: in theſe *faculties* depraved are diſeaſes ſeated, and here the *Scurvy* is *radicated*, and fixed. If you look upon the *blood* and *nervous ſuccus* defiled with a *Scorbutick* impurity, you ſee the *Scurvy* in its various *production* and *maturation*; if you look into the *digeſtive offices* and their *fundamental principles* vitiated and enormous, you ſee the *Scurvy* in its *radication*.

whether the *Scurvy* be founded in the blood, *primario & radicaliter*, as the principal ſeat of *radication*; accordingto the aſſertion of Dr. *Willis*: we will make farther inquiry into the matter. And this we ſhall find out, by examining the procuring *cauſes* of the *Scurvy*, where they chiefly dart their *influence*, and

Tract. de Scorb. pag. 206.

what *principal parts* they *debilitate* and injure, to lay a *Scorbutick foundation.*

Bad dyet. First, *Mala victus ratio*, bad dyet is owned by all to be a *primitive cause* of the *Scurvy*; now this meat and drink have their tryal in the *digestive offices*, whether they be good or bad; and according as they are *transmitted* hence in goodness is the *blood* and *nervous juice* affected with the same: So that the injury of bad dyet is first impressed upon the *digestive offices* (*here is the seat of radication*) perverting their functions; and if the *blood* be tainted and alienated hereby, it is *secundario* by reception, and issuing from thence; not *primario*, as *fons & origo.*

Melancholy and a sedentary life. If a man eats good meat, and drinks good drink seasonably and moderatly; notwithstanding he becomes *Scorbutick*, by reason of some *procuring cause* hapning, as *melancholly* and a *sedentary life.* Where shall we find the *parts* primarily affected and foundation of the disease? Not in the *blood*, not in the *nervous succus*, but in the *digestive offices*, in the *grand laboratorys* of the body, from whom the *alimentary liquors* have their *perfection* or *defection*:

had

had they discharged their *functions* duly, the *blood* and *nervous succus* would be pure and good. But being weakned, depraved and impedited by the *procuring causes* named, the *juices* of the body degenerate and alter from their *purity*, by a vitious supply and feculent *additions*.

A *melancholy* inactive life produce the *Scurvy* after this manner; the *spleen* is principally injured thereby, and does not perform its office vigorously, from whence (*here is a seat of radication*) defects in *fermentation* do arise, the *blood* degenerates thereby, and is become *Scorbutick*; which impurity and *alienation* is not the *foundation* of the *Scurvy*, but the *propagation* and *production* of it; the branch and not the root. In this *habituated melancholy*, the *soul* which is *vitæ directrix & magistra*, becomes torpid and deaded, is contracted and restrained in power, that she does not *exert* and *irradiate* her *vertue* so freely and vigorously into the *principal offices* of the body, that their *functions* are weakly and depravedly executed: and where the *functions* are performed unduly and *deficiently*, there is the *Scurvy radicated*; now this *procuring*

curing cauſe of *melancholy* affects the *Spleen* mainly (accounted the *ſeat* of that *paſſion*) and the *ſpleen* which ſhould elaborate the *blood*, and help to *ferment* it, is hereby loaded and clogged the blood not refined, but tranſmitted *feculent* and impure; the *ſpirits* inactive and dull do not *circulate* the blood ſo freely and briskly, but is apt to become *ſtagnant*; and paſſeth through the ventricles of the *heart* heavily, which cauſeth *melancholy perſons* to complain of a weight and heavineſs about the region of the *heart*; with a great oppreſſion, that makes them often ſigh to throw it off.

Hæreditary Scurvy. If the *Scurvy* be propagated by *hæreditary traduction*, where can the *ſeminary* of this diſeaſe be, but in the *fundamental principles* of nature; whereby the *craſis* of ſome *principal part* is naturally diſpoſed and framed to propagate and promote the *Scurvy* in that body.

When the *Scurvy* is traduced from parents in *ſemine*, it is planted in the *ſeminal principles*, and *connatural* with that perſon: And here is the difficulty of an *hæreditary Scurvy*, that it is mixed and radicated ſo in the *foundation* of their

their being, as not to be *raſed* out; and not founded in the ſtream of *blood*, which admits of *depuration* and *reduction*.

If by a ſlight *contagion ab extra*, the blood receives a taint, it ſtayes nor there long, except ſome *principal part* be perverted thereby; and there it does *radicate* and ſeat it ſelf; and not till then does it *faſten* in the body, but is *fluctuating* and eaſily expelled and ejected by the ordinary *purification* of *nature*, and her own helps and wayes of *emiſſion*: but having gained a *Fort*, ſome *principal part* or *office*; does there ſeat it ſelf, perverts the *craſis* and *function* of that part, alienates the *Archæus* and *director* of that *office*; which *faculty* being ſeduced, here is the *foundation* of the *Scurvy*, and from hence it ſpringeth, as the *radix* of the *diſeaſe*. Contagion.

Long *Feavers* and *Chronick diſeaſes* are reckoned amongſt the *primitive Cauſes* that introduce the *Scurvy*: and how do theſe procure the *Scurvy*? by changing the *Craſis* and vitiating the *tone* of ſome principal *part* wherein ſuch diſeaſes were ſeated; that being perverted from the *integrity* of their

nature

nature and *office* by long ſickneſs, and *dyſcraſy*; doe then act in a *Scorbuitick* difformity, much different from the *rectitude* of their *functions*. From whence *Scorbutick Effects* doe enſue. And ſometimes by long ſickneſs the *parts* are ſo altered, the *veſtigia* and *impreſſions* thereof ſo grounded in them, that with much difficulty, if ever, they be reſtored again which makes the *Scurvy* in ſuch perſons ſo *contumacious* as often we find it. Now had theſe *impreſſions* been *characteriſed* upon the *blood* and *humours* only, they being in a fluctuating *ſtate* alwayes, by daily *defæcation* and new *additions*; Their *impurityes* and *contamination* are carryed of, and waſted continually, by the induſtry of nature, if ſhe be ſtrong and firm in her foundation and *groundwork*; if her *principal parts* keep their due *craſes*, and diſcharge their *offices* well. And therefore ſayes *Helmont* very truely; *Natura corroborata eſt morborum medicatrix.* If nature be right and ſtrong in her *fundamentals* and ſolid *parts*, the ſtreams that flow in the veſſels though defiled and impure, undoubtedly ſhe will purifye, and free her ſelf, with ſome little helps and *pro-*

Helmont.

vocations

vocations to it, as a prudent *Physician* ſhall think fit in ſuch a caſe. But if the miſchief lye in the *dyſcraſy* of a *principal part* the caſe is much altered, as being more perverſe and worſe to be dealt with. And from hence is the *contumacious* condition of ſome *Scorbutick* perſons, that do not yield to ordinary *Medicins*, and ſlight undertakings; but requires time with *potent* and *efficacious* means, *judiciouſly* exhibited, And a *tractable Patient*.

Great *hæmorrhages* and large *profuſions* of *blood*, is a *primitive cauſe* aſſigned to introduce the *Scurvy*. Now this does not defile the blood *poſitivè*, but *conſequenter*; not abſtractly conſidered in its own nature: it only abates the quantity, that if the *blood* be good before, the remainder alſo is good: How comes the *Scurvy* in then? Thus: *Nature* muſt ſupply this loſs and fill up again; but the *blood* which ſupplies, is not ſo good and pure as that which was prodigally ſpent (*here comes in the Scurvy.*) And why is not this new *blood* ſo good? Becauſe the *ſanguifying faculty* or office of *ſanguification*, is debilitated and made deficient by ſo great an *effuſion* of *vital ſpirits*, that it does not

Fluxes of blood.

not perform with that *vigour* and *integrity* as before, but depravedly and deficiently.

From hence it appears that the *faculty* or *office* of *ſanguification*, and principal *parts* contributing to that work prævioufly, are the ſeat and *radication* of the *Scurvy*, and here it is founded from the *primitive cauſe* aforeſaid. If the *vital ſtream* be impure we muſt impute it to the nature of the *fountain*, from whence it proceeds; if the blood be bad, we muſt aſcribe it to the *office* of *ſanguification* and the *dyſcraſy* of parts contributing thereto, and relating to its *preſervation*.

Let the *Scurvy* be introduced by this or that *primitive* cauſe, if it faſten in the body and grow to any heighth, it is *planted* and *radicated* in ſome *principal part*, and in the *principles* of that part; not in this or that *humour*, *chyle*, blood or *nervous ſuccus*; but only *ſecundario*, iſſuing as the *product* and *effect* *per tranſmutationes erroneas*; not as the fountain, but the ſtream tincted with a *Scorbutick Miaſm* from thence. Hereby we may underſtand why two perſons *dieting* and ordering themſelves alike, yet the one ſhall be *Scorbutick*

and

and the other not: For although the *primitive causes* are equal to them both, yet the capacity of the *subjects* are different: *quicquid recipitur, recipitur per modum recipientis.* The one hath *Axioma.* the *principles* of his body more firmly and equally *radicated*; consentaneously operating, and not easily perverted from integrity: The other hath his *faculties* unequally distributed *cooperating difformiter* and apt to *declension*, are easily seduced from the *rectitude* of their *functions*, from the *crasis* and *texture* of parts. *Nature* does not equally distribute her *power* into all *individuums* alike, nor into all *parts* of the body in the same person: but one is strong and well tempered; another is weak and *dyscrasyed.* And from hence the different *propensity* of bodyes to *diseases*; hence the *variegation* and *Protean* shapes of the *Scurvy*; and from hence the *difficulty* of their cures are adjudged, from the *dyscrasy*, *atony*, and *perverseness* of parts to be reduced to the integrity of their *functions.*

The *primitive causes* we have briefly run over, makes preparation for the *Scurvy*; the *vital* and *fundamental principles radicates* it; the *blood* and

nervous

nervous ſuccus propagates and ſpreads it by way of *ramification*; the *pains*, *ſpots*, *tumors*, and other apparent *ſymptoms* ſhew its *fructification* and *maturation*.

From theſe *conſiderations*, I am perſwaded to aſſert contrary to this *Learned Profeſſor* Dr. *Willis.* that the *Scurvy* is *radicated* in the *principal parts* of the body, the *laboratory's* of digeſtion and *tranſmutation*; is ſeated there *primario & fontaliter*; is in the *chyle blood* and *nervous juice ſecundario*, by reception and *contamination* iſſuing from thence, as propagating *rivulets* to diſperſe it through the *body*.

The next *conſiderable* we are to take notice of, is the *analogy* this *Author* makes uſe of to *explicate* the nature of the *Scurvy*: Comparing *Scorbutick* Pag. 206. *blood* with the various *ſtate* and alterations in *wine*.

Now that which does *illuſtrate* is ſuppoſed and ought to be more *intelligible* and *patent*, than that for which it is brought; but Wines are equally obſcure with the blood in their cauſes of alteration and degeneration; and therefore to me it is *ignotum per æque ignotum adumbrare*. And he that is moſt converſant

verſant among *Wines* as *Vintners*, obſerve their alterations, but the true *Philoſophy* in theſe caſes they know not: the ὅτι they ſee, and by *traditional advice* and obſervations can cure or *palliate* ſome of their faults; but the διότι they underſtand not; the *elevation* and *depreſſion* of *ſalts* and *ſulphurs* of Wine, is as ſtrange to them as the cauſes of degeneration in the blood of *Scorbutick* perſons. And what does this inform a *Philoſopher*? Thatboth do change and degenerate is very plain, but the *modus* and *cauſæ* the *manner*, and the *intrinſick cauſes* or *principles* upon which they move, are equally obſcure.

Scire, eſt per cauſas cognoſcere: And ſo far does the *analogy illuſtrate* and promote our knowledg, as the cauſes of the one, are more *conſpicuous* than the other: Now if the cauſes of the alterations and *degenerations* of *Wine* be no more open to our underſtanding, but remain as difficult and abſtruſe as the *cauſes* of the variations of the blood, then is the analogy fruſtraneous and of little uſe. The *aſſumption* from hence is true; the concluſion neceſſarily followes. The *ſimilitude* of wine and blood in their *dyſcraſyes*, to

para-

parallel each other, hold no farther than the *quod ſit*; and that but in ſome of them, which other liquors alſo do reſemble: But if we dive into the reaſons of *ſulphurs* and *ſalts* in this or that ſtate, cauſing ſuch *alterations*, we may as ſoon find them in the one as the other, without the aſſiſtance of either.

That the changes and alterations of *wines* and *blood* may conſent and agree, or be ſomething alike in ſome *degenerate quality* or *property*: That there may be a parity and proportion as to ſome particular of their *variations* and *degenerations* is reaſonable, and demonſtrable; but their occaſional and *procuring cauſes* are various; and the *eſſential cauſes* of ſuch tranſmutations depending upon different *principles*; as alſo their *curations* and *reductions*, in the method and means, are very different and hold little proportion of *ſimilitude*: If ſo, then the *doctrine* of *analogy* between *Wine* and *Scorbutick blood*, will afford but little aſſiſtance in the *reduction* of the one or the other to their *priſtine ſtate* of integrity; and *conſequently* can do us little ſervice, in demonſtrating or curing the *Scurvy*.

This

This learned Professor goes on with the Similitude thus: *Porro ob duas præcipue causas, uti vinum, ita sanguinem ægrotare innuimus, nempe vel quoniam aliquid extraneum & non ritè miscibile, huic aut isti confunditur; vel quoniam liquoris crasis, sive temperies pervertitur: h. e. quatenus elemento uno, forsan aut altero, quibus dominium debetur, suppressis, alia, qua subjugari oportuit, exaltantur. Furthermore for two causes chiefly, even as Wine, so the Blood is distempered; either something extraneous and not truly miscible, or not apt for commixture, is added and confounded with them: or because the crasis of either liquor, or temperature is perverted: That is, in as much as one or other of the elements which ought to be supreme is suppressed; others which ought to be subjugated, are exalted.* Dr. Willis. de scorb. pag. 206.

The first part of this assertion, the Author well explains and clears in the following words. *We observe in Wine that when the fæces being separated and præcipitated to the bottom, they be stirred up, and mixed again; or when any heterogeneous matter, as fatt or other exotick sulphur be cast into the Vessel, the Wine that was calme and still, is now* Ibidem.

much troubled by bubling and fermenting which unleſs it be checkt ſoon, the Wine is in danger to be ſpoiled: Then, ſaith he, *pariter &c. in like manner there are many things that do not commix with the blood, which diſturb its circulation, and hinder the common order and courſe, which extraneous matter if not timely removed perverts the craſis of blood.* This is true, and the reaſon will hold in other liquors as well as Wine, which naturally have a deſire to preſerve their own bodies intire and free from *extraneous commixture.*

Now the *doctrine* from hence we muſt obſerve, is this; that *Chylification* and *previous alterations* of the alimentary *ſuccus*, if it be not fitly *tranſmuted*, and duly prepared, to *incorporate* and joyne with the *blood*, amicably and *conſentaneouſly*; then a diſturbance ariſeth in the *blood*, to ſeparate and ſequeſter this *diſcordant matter*; which if nature be vigorous and able to do it timely, does recover its former *ſtate* and *condition*; but if otherwiſe, does then alter and *degenerate*. And here we muſt take notice, that this *diſcordant matter* may happen two wayes; either by the *indiſpoſition* and un-

unfittneſs of the *alimentary* object, our *food*: or the *irregularity*, *inſufficiency* and *indiſpoſition* of the *faculties* or *digeſtions*; whereby their *tranſmutations* are *aliene* and depraved.

Having lightly touched the firſt part of the *aſſertion*, ſetting forth the *turbation* and diſorder of the blood *ab extraneo adjecto*: I come now to the latter; laying open the *dyſcraſies* of the *blood*, *ab interno principio exaltato*. And here we ſhall find matter of *argument* and *diſcourſe*. If you look back into this *Author's* own words, he expreſſeth the variations of the blood, by the different ſtat of the elements, one or other being exalted unduly above its *conſort*.

By *Elements* here he does not underſtand the *peripatetick quaternary*; *Earth*, *Air*, *Water*, and *Fire*; but his own 5 principles, *ſpirit*, *ſulphur*, *ſalt*, *water* and *earth*, as his following diſcourſe does manifeſt. And for the introduction and eſtabliſhing of theſe principles, he caſts out of our *Philoſophy forms* and *qualityes*, and calls them *inania figmenta*: but how undeſervedly theſe are rejected, would require a long debate: only this; If it were ſo that

Dr. *Willis: lib. de fermunt: cap.* 1.

forms were but *fictitious* uſeleſs terms, and no *reality* and *verity* in them; then theſe *axioms* of our famous predeceſſors and the whole *ſyſteme* of *Philoſophy* is unhinged: *Forma dat eſſe: Forma dat diſtingui: Forma dat operari.* And if theſe be taken away, how ſhall Dr. *Willis* his five *principles* ſubſiſt apart; they muſt of neceſſity be confounded together, and become a *chaos*; except they have their peculiar *forms* to *diverſify* them, and *ſeparate* them one from the other. But to wave the proſecution of this point, which otherwiſe would launch me into a vaſt *ocean*; I muſt keep within the banks of our preſent undertaking, and follow the current of this *Authors* diſcourſe upon the *ſubject* in hand.

Axiomata. Philoſophica.

He proceeds to ſhew the diverſity and *variations* of the *blood* in *Scorbutick* perſons, by *exaltations* and *depreſſions* of his five *elements*; by their peculiar and different *combinations* one with the other. As in Wine, ſo likewiſe in the Blood; *parallelõs*: which ſhews an ingenious *contrivance*, but the *demonſtration* of its verity, *mihi nondum conſtat.*

Pag. 207.

To

To wave the *Similitude*, of which ſomething hath been ſaid; we will examine the *blood*, in its *variations* and the reaſons of the ſame. And here firſt you muſt underſtand, the *materia ex qua* of what blood is made; and that is either *remota* or *proxima*. The *remote* matter that contributes to the making of the *blood*, is mans fōod, *meat* and *drink*: This *food* is various and *heterogene*, of different *natures*; this *variety* depends upon the peculiar diſtinct *form* of each, differencing *ſpecifickly* one ſort of meat from another. Theſe various *ſpecific natures* enter the body of man to make up that *compoſition*. And a'though the *vita prima* of theſe ſeveral *ſpecificks* be refracted and changed, yet their *median natures* do ſhew themſelves and *teſtifye* that *formæ manent in mixto*; their Forms are not deſtroyed, but brought *ſub jugo* under the ſpecifick ruling *forme* of man.

If ſo, as it is a moſt rational *philoſophy* and aſſerted by ſolid *writers*; then Man is compounded and made up of various creatures; ſince *vegetables*, *animals* of the Air Land and Water, are his food; and theſe alſo are fed of divers other things, even ſuch as have *antipa-*

thy and great contrariety with man, as *poiſons*; yet theſe are devoured by thoſe *creatures* which afterwards are mans *food*: ſo that man deſerves the name of *Microcoſmus*, being a collection and *Epitome* of the *univerſe*: *Nam omnes ſpiritus hujus mundi, aſtrales, elementales, meteorici, metallici, minerales, vegetabiles, animales, ſunt incolæ corporis hujus animalis*, ſayes *Kozac*. From whence it was truely affirmed by the old Philoſophers ἓν εἶναι τὰ πολλὰ, καὶ τὰ πολλὰ ἕν, *Unum eſſe multa, & multa unum.*

Kozac de Sale, pag. 18.

Plato. Hippoc. Galen. Anaxagor.

From this doctrine we muſt draw theſe *obſervations* which are to the purpoſe in hand: If ſo many diſtinct *forms* and bodyes enter the *compoſition* of man, and this multitude be *ſubjugated* under his *ſpecific form* which is *Anima*; then ſo long does man ſubſiſt in a quiet good *ſtate*, as he is able to tame and keep under in *ſubjection* to his being, this vaſt multitude of various *creatures* of which he is compoſed; and Being thus ſubdued and governed, there is a *harmony* and *concord* in this great *diverſity* and *concourſe* of different *creatures* (as it is in the *Macrocoſm*:) but when *nature* declines, or errs in *government*; when the reins are more ſlack; when the

the *ſpecifie Form* of man is not ſo powerful, or ſwerving from a due œconomy, by his lapſed nature; then the *ſubjugated forms*, thoſe *creatures*, one or other, ſtarts up and ſhews it ſelf in a *peculiar nature* and clothing *ſaline*, *ſulphureous* &c. which alſo do admit of ſubdiviſions and are of divers *natures*: And ſince it is true, that, *iis conſtamus quibus nutrimur*, we conſiſt of ſuch as we are fed and nouriſhed, and thoſe are divers; hence it is, as *Hippocrates* ſaith, there is in man, *bitter* and *ſweet*, and *ſalt* and *acid*, *auſtere*, *inſipid* &c. hundreds more, which have proper and peculiar *forms*, yet by *contemporation* and reſtraint under the *ſpecifick ruling Form* of the body, have a friendly ſociety, & we perceive no *diſturbance* by the *diverſity* of their *natures*: *but when any of theſe are ſeparated* (ſaith he) *and ſtand in their intire nature; then a diſturbance ariſeth in the body*. That is when any theſe peculiar forms are exalted and do exerciſe their own power and *ſpecifie vertue*, without *ſubjection* and *ſubmiſſion* to the *ſpecifie forme* of man; then we find the *peculiarity* of their *natures*, to be *diſſonant* and *diſturbing* to the regular *œconomy* and *govern-*

Hippoc. περὶ ἀρχαίης ἰατρικῆς.

ὅταν δέ τι τούτεων ἀποκριθῇ. *Ibid.*

ment of the body: but so long as they remain refracted *sub jugo*, in servitude to the *specific nature*, then the body is peaceable and quiet.

From whence are the various and strange *productions* that have been found in mans body, as *stones*, *wood*, *mettals*, *worms* and other creatures; as credible Authors report, (and some of which we can testifye:) but because the *seminaries* of these things enter into mans body, which by *eluding* or *evading* our *digestions*, do grow up & shew their *specific natures* and entire bodies.

Bartholin. cent. 4. hist. anat. 'Tis storyed of one *Katherine Geiler* who used to drink of a standing water in a Medow neer her abode, (that was pregnant, with the seminaries of animals doubtless) and from the year 1647. to the year 1653. did vomit up hundreds of frogs, toads, lizards &c. besides bones and other things. *It seems strange and wonderful* (sayes *Kozac*) *that there should grow in mans body gold, or silver, or iron, or copper, tin, lead, or wood; and yet sometimes it hath been so, as History makes mention.*

Kozac. de Sale. sect. xv.

Borellus. Kercher. Severinus. Bartholin. &c. I might give you particular accounts from very good *Authors* of the various *preternatural productions* that have been

been found in, or come out of man: Which proves that their is *various ſeminal principles* latent in mans body, of which he is made up; and that ſometimes do rebel againſt the government; do ſtand up and appear, in their own nature and likeneſs. If we do but conſider the variety of *tumors*, *phlegmons*, *eryſipela's*, *ocdema's*, *ſcirrhus*, *aqueous tumors*; and the variety of *Ulcers* having peculiar *natures*, and *ſpecific differences*; we muſt allow them their peculiar *ſeminal principles*, as roots from whence they do ſpring. The blood is ſo variouſly *degenerating*, and liable to ſo many *impreſſions* and *alterations*, as is not to be ranked in order or number; theſe *innumerable changes*, muſt ariſe from peculiar *efficient cauſes*, which muſt be more in number then five *principles* or their *combinations* to father ſuch a vaſt *progeny*.

In the *retexture* and unravelling of bodies by *fermentation* in the ſtomack, ſo many various parts is there to be diſtributed as the *variety* of our food does conſiſt of; & theſe *ſeveral parts* are to be prepared and fitted ſo, that they may be made apt to *aſſociate* and joyn with the ſeveral parts of mans body, moſt

moſt aggreeable to the *nature* of each: Now if the *ſpecifick* ruling *Form* (*anima*) with its aſſiſtants, does not rightly prepare alter and ſubdue in the *digeſtive offices*; does not *diſtribute* in due time the *util*, and *ſequeſter* the *excrementitious* droſſy part; the regular *œconomy* is perverted and diſordered, the body changeth and *degenerates* from its *regular* and *uniform ſtate*; and by ſuch *remiſſneſs*, the ſubordinate *forms* of *creatures* in mans body, have opportunity to ſtand upon their own right, and *exert* their own *power*; begin to exerciſe their own *proprieties*, and be diſobedient to the natural *government* of the body; do then ſhew their own natures, not ſubordinately in *ſubjugation*, but *eminently* and *independently*, refuſing ſubjection to humane nature.

The reſult of this diſcourſe is thus much: That the *various alterations* and changes in mans body ariſeth ἐπὶ τὸ πολὺ, from *ſeminal principles* and different *forms* of *creatures*, reſiſting, or looſed from their *ſubjugation* and ſervitude; from the occaſions and *opportunityes* aforeſaid; not from *ſulphurs* and *ſalts* &c. Dr. *Willis* his five principles.

I

I do not hereby deny the distinction of *saline*, *sulphureous*, *spirituous*, *aqueous*, *terrene*, as useless termes; but I do not admit them as *principles* or parts *ultimo sensibiles* into which all bodyes are resolved. For, first, they cannot be *principles* because they are not the same in all bodies; but *analogũs* have only some *resemblance* and *proportion* one to the other: Secondly, they are not the *ultimate resolution* of parts, but a *gradual retexture* and separation, and by a *chymical analysis* you may *subdivide* and reduce the number to less than five. Thirdly, they are in some bodyes *mutuo convertibilia & transmutabilia*, they change one with another, and one into another. And therefore they are not a firm *basis* to rest upon and set down; or as the fartheſt step a philosopher may take in the *unravelling* of mixt *bodyes*: they may well be allowed as distinguishing *generical terms*, comprising under them *various species*; for these *principles* so called, some of them may be *subdivided* into various kinds which have little or no *affinity*, except by their *generical title*, as a *foul* and a *fish* are both Animals.

But

But this parergõs; and, to return to our purpoſe: Bodies in *general*, or in *particular* our *blood* is ſometimes *ſaline*, ſometimes *ſulphureous*, ſometimes *ſpirituous* brisk and *volatile*, ſometimes more *terrene* groſs and *fixed*; as the active *principles* of nature ſtamp their *impreſſions* upon the matter of bodies, they are changed and appear ſometimes this, and ſometimes that: Now if matter be obedient and ſubject to the *impreſſions* of *active principles* which are moſt *predominant* at thoſe times, and will be *modified* and formed into various *ſhapes* and *figures*, as the ruling *principles* act their parts by *ſucceſſion* and turns; then *ſulphurs* and *ſalts* are but the *garments* and external *garb* of Nature which ſhe puts on and off, to ſhew the variety of her *habiliaments* and *furniture*, accommodating and fitting her to act ſeveral parts, which theſe *ſcenes* do preſent: And theſe appearances are but as the *cortex*, the out ſide which is preſented to our *ſenſes*, but the *myſterious agents* are covered and act inviſibly. *In uno nucleo latet & vermis & arboris ſeminarium, ſed ad oculum non patet, in nucleo hujus vel illius ſeminarii centrum, vel centri diſcrepantia; ſed ex eadem*

Kozar.

eadem ſenſibilis corporietatis portione procedit arbor, ex qua vermis, vel vermis ex qua arbor. —— *Non ſaltem nucis, ſed omnium eſculentorum & potulentorum eadem eſt ratio. In one nutt. kernel* (ſayes *Kozac.*) *there lyes hid the ſeminary of a worm and of a tree; but it does not appear to the eye the center or point where the one or other lyes; but from the ſame ſenſible part of that body, proceeds the tree, from which alſo the worm is generated; or the worm, from which the tree.* Then a little after he concludes thus; *not only of a nut, but it is the ſame caſe in our meat and drink.*

Hereby we may underſtand and *rationally* determine, that the *various changes* in the *blood* does not ariſe from the *exaltation* and *depreſſion*, or peculiar *aſſociations* of thoſe five *principles* aſſigned by this learned *Profeſſor*; but from the *latent inviſible forms* thoſe active *principles*, emancipated from their *ſubjugation*, or not well ſubdued to the *ſpecific humane* nature, but reſiſting or revolting from that *government*, from various *procuring cauſes*, occaſioning their *contumacy* or *diſobedience* to ſubjection. When thoſe *laboratory's* of our bodyes,

bodyes, the *digestive offices*, are weak or depraved, in their *transmutations* of those various bodyes comprised in our food, does not *refract* and *change* their *natures* sufficiently, and by a *coercive power* keep them under in servitude to human nature; they then *reassume* some *properties* of their peculiar natures, by the *principles* of *reduction* remaining in them, and *separate* from the *nature* and *service* of our bodies: *Hinc tribuli & spinæ*; these are the thorns in our flesh that molest and disturb us.

Our *food* being of divers *natures*, and comprising under their *specifick differences*, subordinate *constituent forms* and *seminal principles*, will therefore admit of various *transmutations* not only *saline*, *sulphureous*, &c. those five and their different *associations*, but hundreds of *alterations* it is capable of, and lyable to, in the body of man, not *reducible* under those heads, except you allow each of them a *generical latitude*, and a large *analogical extent*; for *salts*, *sulphurs*, *spirits*, are as various as the things from which they are separated; and are the *exterior garb*, and clothing of nature in which she appears, alters and varyes, as the *seminal* and *vital*

prin-

principles act their parts; or art operrates upon them: So that the different *ſtate* of the blood in *Scorbutick* perſons, *ſpirituous*, *ſulphureous*, *ſaline*, &c. ſo admitted in the latitude aforeſaid, and not elſe; are not the *exaltations* and *depreſſions* or *combinations* of ſtanding *principles*, and the actors in thoſe various ſcenes; but are the *products* and *effects* of various *efficient cauſes*, characteriſed upon tranſmutable *pantomorphean* matter; are ſignal and conſequentional, not the cauſes of ſuch *Scorbutick* alterations.

CHAP.

CHAP. VIII.

Prolegomena: *Or, an Induction to the knowledg of the* Scurvy.

BEfore I come to *define* the nature of the *Scurvy*, its matter and manner of generation and germination, I muſt *premiſe* ſomething concerning the *Office* of *digeſtions*, for the clearer apprehenſion of what ſhall be thence *deductively aſſerted*; leſt I taking that for granted, which others in that action or office deny, it will be objected I ſtate my *poſitions* upon falſe *ſuppoſitions*, and ſo denying the *baſis* of my Reaſons, will think they have ſatisfied the *Argument* and evinced.

I ſhall therefore ſurvey the *digeſtive offices* in the regularity and irregularity of their *actions*, *defections*, and *errors*; aſſign their cauſes, and draw my concluſions *ad punctum*, to concenter with my intentions and *ſcope* aimed at.

Meat being received into the *ſtomack*, muſt ſuffer a *tranſmutation* there in the firſt *laboratory* and preparatory-Office, for nutrition of the body: This *digeſtive alteration* is performed by *fermentation*; which is a *reſolution* or *retexture* of our food, volatiſing and tranſmuting it into a *chyle* or white juce: That which before was fixed, groſs, hard or tough; is made *volatile*, *rare* and *fluid*: which having obtained that *previous digeſtion* and perfection proper for that place, the lower *orifice* of the *ſtomack* opens and gives it emiſſion, ſending it to the next *Office* of *digeſtion* for a new *impreſſion*.

How this is performed, there are different opinions amongſt *Philoſophers* and *Phyſitians*: *Ariſtotle* and with him moſt of the acient *Phyſicians* have aſſerted, and built upon, as a ſure foundation, That heat is the *principle efficient cauſe* of digeſtion; being induced to this opinion, from the ſimilitude of *artificial concoctions* and digeſtions: And finding humane bodyes to be actually hot, ſuppoſed by increaſing of natural heat, to fortifie the digeſtions; and that the difference of *digeſtions* in ſeveral perſons, or the ſame perſon at ſeveral

times, did depend and vary, from the degrees of *heat*, its *debilitude* and *fortitude*: but upon a due examination you will find it otherwiſe, and from the ſtrength of Reaſon be forced to conclude thus:

1. That Heat is a chief agent in the artificial preparation and *prævious digeſtion* of meat, before it be received into the ſtomack, whether in *roaſting*, *boyling*, *baking*, &c. but not in the natural *digeſtions* of the body: For, Nature in its principal *operations* works not *primarily* by the *ſignatures* and concomitant *effects* of life (as Heat) but by *vital principles*, as efficient primitive cauſes.

2. That the changing of food into *Chyle*, is a *fermental tranſmutation* from *vital principles*, not an impreſſion of a ſubordinate inſtrument.

3. That digeſtion in humane bodies, is accompanied with heat, though not the proper effect of heat.

4. That internal natural heat by its own power and *peculiar efficiency*, makes not a *digeſtive tranſmutation*, but is a concomitant of vital operations, contributing *inſtrumentaliter & æquivoce*, to various effects; and is ſubſervient

ient in the ſeveral *digeſtions* diſtinct from each other.

5. That *extraneous* and additional heat does excite the *vital principles* to operation, and is aſſiſtant *inſtrumentaliter & excitativè* in performance, *propter ſymbolum qualitatis.*

6. That heat, *quatenus* Heat, acts *univoce*, alwayes producing the ſame effects: but as it is the inſtrument of various *efficient cauſes*, concurrs in the production of various *heterogen effects*; as alſo in reſpect of divers *objects* upon which it acts.

7. That the variety of heat in ſeveral bodyes are but *gradual differences*; but diverſity of digeſtions are from *formal diſtinct proprieties.*

8. That the *gradual* difference of heat in divers perſons, or in the ſame perſon at ſeveral times, do *ſignally* teſtifie the ability of the *vital principles* in their vigor *a priori*, in their eſſential cauſes; or *a poſteriori* in their manifeſted operations *claudicari*, to be *impedited*, or *depraved* accidentally.

9. That *heat* acts not as *principle* inſtrumentally in the ſtomachical digeſtion, but ſubordinately inferior to a ſuperior manifeſt quality, more immedi-

ately the *organ* of the vital principles: For, *heat* may be ſufficient, yea, abound, and *digeſtion* weak or depraved (as in *Feavers*;) but the other cannot be in its *rectitude* and *vigorous*, but the *digeſtive faculty* muſt be ſtrong and unblamable.

10. That variety of *appetites*, ſuting with and deſiring ſome kind of *meats*, but refuſing and rejecting other as *diſſentaneous* and *diſguſtful*, ariſeth from the *peculiarity* and ſingular propriety of *ſtomachical ferments* or *craſes*, and not varying and changing the gradual diverſity of heat: For, that which is *principal* in operation is alſo *principal* in election of the proper object of that faculty, embracing and coveting what is moſt ſuteable and agreeing; but *repugning* and ſhewing *averſion* from what is *diſcordant* and *diſagreeing*, by an innate power and prerogative.

11. That the *digeſtive* faculty in *fiſhes*, being of another *region*, is not accompanied with *heat*; becauſe their *vital principles* do differ *toto genere* from Land-*creatures*: And therefore *Heat* is not neceſſarily required as a *principal agent*, or inſtrument, in digeſtion;

geſtion; but ſhews it ſelf as a diſtinguiſhing *character* of *vitality*; yet not vainly or barely ſo, but uſefully where it is.

Hence it appears from theſe *Theſes*, with their connex'd Reaſons, that *Heat* is not the *primary efficient cauſe* of digeſtion, but an *emanative* accident, or *characteriſtical* concomitant of *vital principles*, inſtumentally ſubſervient in the *digeſtive faculties*; and therefore I muſt reſt upon another *baſis*, more firm in Reaſon, and aſſign other cauſes the parents of *digeſtive tranſmutation*, ſpecifically diſtinct in every digeſtion: which that you may the better underſtand what they are, I ſhall divide and diſtinguiſh them into theſe following *Propoſitions*.

1. That the *primary efficient cauſes* of digeſtions, is the different *ferments* or peculiar *craſes* of the parts; *ſpecificating* and determining the *formal power* of humane nature, to a peculiar tranſmutation of aliment.

2. That the ſeveral digeſtions have peculiar diſtinct *ferments* or *craſes*, acting ſubordinately in their own *ſtations*, *ſub imperio formæ ſpecificæ* until aliment be brought to its height of perfection,

fection, for nutrition of the body.

3. That these *ferments* are primitive *essential causes*, and therefore *a priori* indemonstrable; but discover themselves *a posteriori* in their distinct operations and effects.

4. That the *impressions* of the several *ferments* upon their alimentary *objects*, are so distinct, that their *productive alterations* are alien, dissimilar, and opposite; yet conducing to one ultimate intention, The nutrition and conservation of the body.

5. That the *producted alteration* of the precedent digestion, if not subdued and changed by the *subsequent* in its passage, is *hostile*, injurious, and a *morbifick* cause; if it submit not to the power and *government* of that Office, through which it hath transmission, by receiving the *transmutation* and *character* of that place; so the *acid Cremor* of the first digestion is changed into a more *balsamick saline nature* in the second; else, Gripes in the bowels and fluxes do ensue.

6. That the *emanative* influential power of the *ferments* is absconded in their causes (because *vital* principles) but detected by their manifest qualities,

ties, ſubſervient to their intentions, and *inſtrumental* in their operations, do ſhew the diverſity of their natures, and what they are:

7. That the inſtrumental *qualities* of digeſtion are indiſpoſed and unfit, by their *intention* or *remiſſion*, being vitiated and depraved from their own natures and proprieties, by improper *diſcordant food*, carrying in their natures alienating and *hoſtile* qualities; or *ſimilar* qualities in *exceſs*, advancing the *fermental* qualities to a luxuriant injurious exaltation: as, Pricking and gripes in the ſtomack from *acid* Juices, as of Lemmons, *&c.*

8. That the *alimentary object*, conſiſting of fermenting *principles*, does concur and *co-operate* in fermentation, well or ill, *pro varia cujuſque natura.*

9. That the different *craſes*, and peculiar *mixture* of the parts of mans body, by the continual *acceſſion* and *tranſition* of various matter, in time does alter, *degenerate*, and *obliterate.*

10. That the *alienation* and degeneration of the *craſis* of parts by time; cauſing a depraved *fermentation* and

tranſmutation of alimentary matter received; does produce new and ſtrange *morbifick effects* in the body: hence it is (and every perſon may obſerve) the alteration of their bodyes apparently different in ſeven years; or ſooner *provitæ genere*: And in the *progreſs* of mans life, ſome diſeaſes appear at one age, other maladyes at another, *pro varia fermentationum differentia.*

11. That the decay, *alienations* and declenſion of the *ferments*, is haſtned and procured ſooner by *irregular living* and *injurious cuſtomes*, offering violence to nature; does pervert the *principles* of *fabrication*, and government in the *Microcoſm*; cauſing a ruinous diſorder, before a *ſpontaneous* falling of, and inevitable inability to ſubſiſt, *ſecundum leges naturæ.*

12. That as the vigorous unaltered *craſis* of the parts (*cæteris paribus*) produce a good *fermentation*, and conſequently good nutrition; ſo *è contra*, the debility, *diſproportion* and variation of the *ferments*, beget a *corruptive* and *morbifick* fermentation, diverſe *pro varia eorum læſione & diſproportione.*

13. That

13. That by reaſon of the continual action and re-action between the parts recepient and the food recepted, the craſis of the parts ſuffer an alteration, & degeneration from their primogenious temperature and harmony of principles: ſo that by time, it is no wonder if our deſires to this or that kind of food be varied and changed; or that our digeſtions be much different in vigour, and what elſe attend or are the products of the ſeveral digeſtions.

14. That errors in digeſtion may ariſe from the *depravation*, enervation, and decay of the *ferments*: or the indiſpoſition of their inſtrumental *qualities* and *organs* by which they act; or the *intractability*, *diſcordancy*, and unfitneſs of the object-matter to be wrought upon.

15. That the *faculties*, by provocation from unnatural bad cuſtoms, are thruſt and enforced from the conſtancy and *regularity* of their *operations*; thence grow diſordered, debauched and habituated in diſobedience to the *inſtitutions* of *Nature*; do hardly and with difficulty return and be reduced, unleſs *coacted* by prevalent good means,

and

tranſmutation of alimentary matter received; does produce new and ſtrange *morbifick effects* in the body: hence it is (and every perſon may obſerve) the alteration of their bodyes apparently different in ſeven years; or ſooner *pro vitæ genere*: And in the *progreſs* of mans life, ſome diſeaſes appear at one age, other maladyes at another, *pro varia fermentationum differentia.*

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and regular care for their *reduction* and reſtoration.

16. That the *facultyes*, without violence offered, or diſturbance, *ab extra*, from injurious bad cuſtoms and irregular living, do *deficere in radice*, ſpontaneouſly fall off and *deſiſt*, ſooner or latter according to their ſtrength and radication *ab ortu*, in their firſt plantation and *initiation*: and therefore it is that ſome in the ordinary courſe of Nature (though irregular in living) do out-live, and have their *faculties* perform vigorouſly of longer *duration*, than ſome others more *regular* and conformable to the Laws of *Nature*; becauſe the difference is great in the *Principles* of their Nature, and foundation of their Beings.

17. That *Diætetick* errors, as in *meat* and *drink*, *ſleeping* and *watching*, *motion* and *reſt*, *paſſions* of *mind*, *&c.* do ſo diſcompoſe and diſorder the *vital Principles* in the exerciſe of their Offices, that their ſtrength and *vigour* is thereby impoveriſhed and abated, their duration ſhortned, and haſtens them to a *period* of *extinction*: For, as

vital

vital Principles are radicated and eſtabliſhed by *Nature*, ſo are they beſt kept and longeſt preſerved, by that courſe and *method* which *Nature* hath enjoyned for their *tuition* and conſervation; but being tranſplanted out of their *genuine* and *native regularity*, by incongruous and unnatural Cuſtoms, they *degenerate*, decay, and are of ſhorter duration, much ſooner declining and *terminating* their Beings.

CHAP.

CHAP. IX.

What the Scurvy *is; the eſſential conſtitutive Cauſes; Manner of Generation; and Parts affected.*

HAving determined the uſe and Office of the *digeſtive ferments*, their manner of operation, and *ſpecifick* diſtinction from each other, their divers ſubordinate effects conducing to one ultimate intention, their *declenſions* and *durations*: which being premiſed and rightly underſtood, the Nature of the *Scurvy* in its *eſſential cauſes* and manner of *Generation* will more clearly be detected, and made obvious to reaſonable *capacities*: and to facilitate your apprehenſion and retention, to prevent miſtakes or cloudineſs by a long *dependent* concatenated diſcourſe, I ſhall *aphoriſtically* deliver my opinions, and divide them into morſels, fit for your reception and more

more eaſy *digeſtion*, which you may take thus.

First, Negatively.

1. It is not one *univocal* homogeneous preternatural Humour, the *materia ex qua*, that generates the *Scurvy*; for as the Symptoms and concomitant Effects are various, ſo is their *material cauſe* different and various.

2. It is not *melancholy* degenerate and depraved, acquiring a ſpecifick malignity (as moſt *Phyſitians* I meet with in Print do affirm) that is the material cauſe of the *Scurvy*: for (*a ſignis diagnoſticis*) admit there were ſuch a *melancholy humour* depraved and ſpecifickly malign, this ſpecification would determine it to ſome certainty, and confine it to ſome diſtinct *diagnoſtick ſigns*, indubitably declaring its peculiarity and ſeparation from others; for there muſt be ſome *ſpecifick* diſtinguiſhing *character* which neceſſarily muſt accompany ſuch a *ſpecifick malignity*; but there is none ſuch: for a man is adjuged to be *Scorbutick*, with looſneſs of Teeth and without, with ſpots or without ſpots; and ſo likewiſe of the other ſigns, in their abſence and preſence: and the *Symptoms* are ſo various

various that they contradict and oppugn one another in their declarative ſigns, that they own diſtinct cauſes, not one *peculiar maliguity*.

Farthermore, The diverſity or difference of the *ſcorbutick ſpots* do argue variation of the material cauſe, and not one *Specifick* malign humour: For, if you judg of *temperaments* by colours, making them one ſort of diſtinguiſhing *Characters*, (as you do) ſaying, This perſon is *Phlegmatick*, becauſe pale; and that *Sanguine*, becauſe roſy; and This *Cholerick*, of paliſh yellow: as alſo of preternatural tumors, ſaying this is a *Phlegmone*, that *Eryſipilas*, or *Oedema*, *&c.* from the variation of their colours and external appearance, aſſigning ſeveral *humours* for cauſes; then why not various *commaculations* and *diſcolorations* in parts, as well as various *extuberations*, ſhould challeng divers material cauſes, ſince they differ but *ratione quantitatis*, in the quantity of peccant matter, the one hath more, the other leſs; and ſometimes theſe ſpots do germinate and ſwell into Scorbutick tumors *ex abundanti materia*, from encreaſe of the ſame *depraved matter*, and have their variations

and

and *denominations* as other præternatural *tumors* have.

A juvantibus & contra.

If a *melancholy humour* be the foundation of this Diſeaſe, then *Purgatives* that attract *Melancholy* (as you ſuppoſe) would prevent this diſeaſe, or *eradicate* it; but you may *purge* and *purge*, Spring and Fall, and yet the *Scurvy* ſhall come on and prevail: but if it be *Melancholy* degenerate and malign, as you ſay, then *Sudorificks* would be the grand oppoſers of this diſeaſe; but neither *Purgatives* nor *Sudorificks*, are the adequate Medicines of this Diſeaſe, yet both uſeful *a poſteriori*, applied to the *Effects* and *Products* of it: but that which unhindgeth this *Diſeaſe*, ſtops the ſpring, prevents or eradicates it, *roborates* the *faculties* intentionally and primarily, reſtores them to integrity and priſtine vigour in the performance of their *functions* and duties.

A Cauſis antecedentibus externis.

Certain *Climates*, *Regions*, and bad *Airs*, are procuring and promoting Cauſes of this diſeaſe; not that we can imagine they ingender *Melancholy* more than other places, but becauſe they

are

are infested with noxious *fumes* and *vapours*, which surrounding and being drawn into the body, commix with the Spirits, and do *labefactare vita principia*, debilitate and depravè the *faculties* in their operations, from whence *Scorbutick effects* do ensue.

But you may say, A sedentary, studious and *melancholy* life doth often breed the *Scurvy*, and therefore it must needs be a *melancholy humour* the material cause and foundation of this disease. To which I answer; That a melancholy inactive life doth breed the *Scurvy*, but how? Not to conclude from thence that it is a *melancholy humour* degenerate and malign; but because by such a condition of life, the faculties do receive much prejudice, decay, and fall off from their functions; for mirth and an active life do roborate all the *Faculties* & keeps them *Vigorous*, the *Spirits* being chearful and lively in the performance of their duties; but by the contrary, are *languid*, debile and insufficient, from whence many inconveniences and prejudices to the body do ensue.

But you may farther say, The Spleen being the seat of that passion, is chiefly affected

affected and injured thereby, and therefore it must need be a *Splenetick* luxuriant humour.

That a *Melancholy* Life doth debilitate and frustrate the *Spleen* in the rectitude of its office, I agree; and not the *Spleen* only, but other *principal parts* and offices of digestion also: for, if *Melancholy* seize and fix the *spirits*, it makes them *torpid* (as it is the property of it so do) and the spirits are *principal agents* in all the *faculties*; then not the Spleen only is prejudiced, and a *splenetick* humour only that abounds, but all parts do participate of the injury *idiopathically*; and all the *digestions* are vitiated, and their ill effects do appear *Scorbutical*, and variously complicated, as their several actions and offices are various.

Having shewed you negatively, and determined that the *Scurvy* is not what some have supposed it to be; I shall now positively set down what it is, in these following *Theorems*.

1. That the *Scurvy* is generated by the conjunction or *conspiration* of divers causes; yet disjunct in their causation, subordinately and distinctly

contributing to a *Scorbutick deformity*: For, although the deficiency of the first *digestion* lay the foundation sometimes; yet it is not compleated so as to challenge the full *denomination* of the *Scurvy*, until by addition from the irregularity and depravedness of other parts.

2. That the *Scurvy* is a complication or *concatenation* of *diseases*, conspiring to the making up of its *deformity* and *Protean* shapes; not arising from a single or solitary cause: For, as the variety of *symptom* and *products* do appear in several parts, dissimilar and unlike, being the effects of several inordinate *faculties*; must of necessity challenge and own distinct *immediate causes*, as the parts wherein those *faculties* do reside, are distinct and separate in place and office.

3. That the *difformity* of the *Scurvy*, in the diversity and dissimilarity of *symptoms*, ariseth from the *complication* of errors in the *digestions*, and variety of parts thereby affected, and drawn into consent.

4. That the *individual variegation* of the *Scurvy* ariseth from the peculiar association of causes, and *idiosyncratical* pro-

propriety of particular perſons, producing ſuch and ſuch *ſymptoms*, which in no other perſon you will exactly find the like: For, as ſound bodies in reſpect of *ſanity*, having a *parallel* equality and proportion in the whole; yet particularly and *disjunctively collated* there is great variety and difference; in *ſtature*, *organization*, *complexion*, *inclinations*, *appetitions*, performance of *functions*, *&c.* If there be ſuch variety of parts, properties, and operations in humane bodies in a ſtate of *ſanity* and integrity, which is *uniform*: Then much more variety and diſproportion in a ſtate of declenſion and irregularity, which is *deform* and *multiform*.

5. That the *Scurvy* is generated *formaliter & eſſentialiter*, in the vital and fundamental principles *ut ens inviſibile*, not diſcerned by ſenſe: But the effects and products are diſtributed, have their reſidence in all the parts, and are ſenſitive objects; as ſpots, pains, looſneſs of *Teeth*, putrid Gums, Tumors, Ulcers, *&c.*

6. That the *Scurvy* is planted *ſeminaliter & radicaliter*, in the digeſtions or digeſtive offices, whoſe *ramifications*,

ſpread throughout the body, and are encreaſed *extenſivè* more or leſs, according to the fortitude and debility of parts, to reſiſt, or conſent and be depraved.

7. That the *Scurvy* encreaſeth, or is worſe *intenſivè*, from the greater fruſtration of *digeſtions* and degeneration of the digeſtive matter, *ex cauſis antecedentibus quibuſcunque.*

8. That the *Scurvy* is procured *occaſionaliter & primitivè*, by numerous and various *dietetick cauſes*, ſeducing the faculties to declenſion and deviation from their rectitude and integrity.

9. That the *ratio formalis*, quiddity, and eſſence of the *Scurvy*, is, defection and *enormity* of the vital and fundamental *principles*; variouſly occaſioned and procured.

10. That the *Scurvy* ariſeth *ab intro*, from hereditary propagation *in ſemine*, connatural with our *conſtitutive principles*: As alſo by degeneration and defection of the *vital principles*, ſpontaneouſly declining through their natural inability longer to perſevere, and fragility of *radication*, and conjunction with each other: or is acquired

and

and procured, *ab extra*, by contagion; receiving contamination by *carnal coition*, *lactation*, familiar *contact*, *&c.* from ſcorbutick perſons.

11. That the *Scurvy* is not reſtrained to any certain *ſymptoms* either in quantity or quality, or *univocal material cauſe*; but is various and *equivocal*, as to the material products, by degeneration and complication; as alſo unlimited in the *ſymptoms*.

12. That the parts frequently affected *primo & principaliter*, primarily and chiefly contributing to the *pravity* of this *diſeaſe*, is the *Stomack* and *Spleen*; for that theſe two parts are principal members, the firſt in *chyliſication*; the other for *depuration* and *preſervation* of the blood. The diſcharge of which offices in integrity and perfection, maintains our health and *vigour*; but by their deficiency and depravation *ut plurimum* lay the ground work of this diſeaſe; the alimentary *ſuccus*, and vital ſtream, from thence being impure and degenerate.

13. That *Scorbute*-ſpots ariſe from impediment, vitiation, or extinction of the laſt digeſtion or aſſimilation; and that *ratione objecti deturpati*; *vel*

facultatis transmutativæ deficientis: Either the alimentary object is depraved and unfit, or the *assimilating faculty* is languid, deficient, or extinct.

14. That *Spots* appear chiefly upon the *Thighs* and *Leggs*, not from the gravity of their *material cause* and ponderous propension of grosser matter downwards, as is commonly alledged for the reason; but because ignoble parts are more weak and debil in their *assimilation*, being more remote from assistance and supply of *vital spirits*, have first the tokens of defection. And further; not the lower parts only are so affected, but the superior parts, frequently, as *Arms* and *Shoulders*, from the same cause, do bear the same *characters*, not distinguishable by *tenuity* and grosness of humor.

15. That *Scorbutick pains* are caused from alien qualities, arising out of the degenerate matter in the *parts* so molested; or from *stomachical acidity* transmitted unsubdued; from defect or debility of the second digestion, or its own *luxuriant exorbitancy*, resisting *transmutation* and obedience in its passage.

16. That

16. That *pro ratione corporis perſpirabilitatis, plus minuſve, ſcorbutus variatur:* As the body is perſpirabile or impervious, more or leſs is the *Scurvy* varied, intended, and remitted, in ſome of the ſymptoms: And therefore the *Craſſities*, impenetration of the skin, and conſtipation of the pores, prohibiting tranſpiration, is a partial organical cauſe of preternatural ſpots, and makes for their continuance and duration: For, as the body in its natural good ſtate is tranſpirable, giving emiſſion to what is ſuperfluous, remaining after the laſt digeſtion: On the contrary, the reſtraint thereof by congeſtion, begets commaculations and defædations of the skin, tumors and apoſtumation, one or other, *pro magnitudine cauſarum.*

17. That although the *Scurvy, eo nomine*, is not of long *ſtanding*, and unknown to the ancient *Phyſicians* under that title, and all the diſtinguiſhing *characters* that we denote it by; yet the diſeaſe *in genere* is antique, though *in individuis* not ſo frequently then, nor *ſpecifically characteriſed* altogether alike, as

we now diſtinguiſh it: For, as humane bodies do decline in theſe *latter dayes*, and degenerate from the *priſtine vigour* of the Ancients in all the *faculties* and abilities of body, by reaſon of *intemperance*, and various manners of *abuſive living*, tranſmitted *in ſemine* from generation to generation; ſo likewiſe, and for *theſe cauſes*, diſeaſes do not continue alike and certain in their *ſignatures*, but have their *variations*, and *complications* different, which occaſions new *names*, though the diſeaſe be the ſame in its *eſſential conſtitutive cauſes* and manner of generation.

CHAP.

CHAP. X.

Diætetick Rules to be observed, as Preservatives from the Scurvy; *and to be regarded in the cure thereof.*

IN the due *Regiment* of Health, and protection from Diseases, you must know that all things which belong, and are necessary for the *preservation* of the Body and support of *Nature*; that they also may be the *procuring causes* of sickness; as also the *fomenting* and *aggravating causes* of diseases already generated: As when contrary to the *law* or disposition of our peculiar natures, they are applyed or used unseasonably, immoderately, incongruously, or any wayes unsuitably to our *nature* and condition of *body*: And therefore, both in the time of *Preservation*, and Curation of the *Scurvy*, they are to be regarded.

And

And since there is not a *moment* of time in which we do not stand in need of *air*; and that, being constantly drawn into the *body*, must needs make for, or against the continuance of *health*, according to the *conditions* and *properties* it is *pregnant* with: Wherefore in preservation from the *Scurvy*, it is of no small concernment the air and *climate* that you live in, to dispose you to it, or defend you from it: The nature of the air is such in some places, that few there are not tainted with it, and this as a *principal cause*. And therefore in *Holland*, *Denmark*, *Sweden*, *Norway*, and such places, this disease is most common; and chiefly in the *Fenny* and *Marish* parts, and *Sea-coasts*: For that, a moist foggy cold air is apt to engender this disease, or encrease it; because the *spirits* thereby are clogged and fixed, dull and *inactive*; from whence *defects* in fermentation, humours incrassated and obstructions, the *pores occluded*, and *transpiration* prohibited. But a warm, dry, serene air, makes much in the preservation from the *Scurvy*: As also in the cure, the *spirits* thereby are kept more *vigorous*, lively, and brisk; the *humours* atten-

attenuated, volatile and freely *circulating*; the *pores* more open and *perspirable*, giving emission to excrementitious *vapours* unprofitable and hurtful to be restrained; and all the parts more free in their *communications* and subserviency one to the other.

Those that retire themselves voluntarily to a studious *sedentary life*; or are confined to a *close chamber-air*, are thereby disposed to this *disease*; or much aggravated and encreased, if already they are *scorbutick*; more especially if *melancholly* be their companion: And where the *Air* is impure, not to be avoided, as in great *Cities*; correct it something by *Art* in your houses, with wholesome *fumes*, especially in moist cold weather: They that live in *Cities*, especially some parts thereof, more close and noisome than others; as in narrow streets, lanes, and allies, are much prejudiced in their health, and inclined to this disease. There is great difference in the place and parts of a *City* to live in; the broader streets and places more open and *airy*, the wholsomer: And the outside (*cæteris paribus*) near the *fresh fields* is better than to be crouded in the middle, provided

no

no ſtinking ditches or dunghils be adjacent.

The next conſiderable in a regular preſervation from the *Scurvy*, is *Dyet*; which ought to be duly obſerved: for, as by convenient *food*, ſuitable and agreeable in all the requiſite circumſtances, *quantity*, *quality*, *time* and *order*: So on the contrary, by a diſproportionate and *unſutable dyet*, the *faculties* are diſordered and debilitated in their ſeveral *functions*, enclining to this or that *diſeaſe*, according to the nature and quality of the *food*, and other *circumſtances* that attend it. And therefore ſome kind of *meats* and *drinks* do diſpoſe, and are the antecedent *cauſes* of this *diſeaſe*; as alſo do cheriſh and help to maintain it where it is already generated, although *procured* firſt by other *cauſes*.

The *groſſer meats*, and ſuch as do not eaſily *digeſt*, are to be avoided; but leight *meats* and ſuch as the *ſtomack* doth well agree with, covet, and *digeſt beſt*; keep to ſuch.

Meats in reſpect of *facility* and *difficulty* in *digeſtion*, are termed Heavy and Light: *Heavy meats* be ſuch as are more *dry*, *hard*, *ſolid* and *denſe*, *coarſe* and

and *tough*; or over *moiſt, ſlimy* and *cold*: Theſe requiring a longer time, and more *acuteneſs* of *ſtomachical ferment*, for their *volatiſation* and *digeſtion*, before they be fit to paſs off the *ſtomack*. And they are either ſo in their *own nature*; as all *old fleſh*; *Bull Beef*, *Oxe*, *Brawn*, *Pork*, *Veniſon*, *Hare*, *Gooſe*, *Duck*, *Swan*, *Crane*, *Bittor*, *Heron*, and moſt *Water Foul*: *Ling*, *Cod*, *Haberdine*, *Stock-fiſh*, and ſuch like: *Beans* and *Peaſe* when they be ſomething old; brown bread, *Barly*, and *Rye-bread*: Alſo ſome parts are heavier of *digeſtion* than other; as brains, hearts, livers (except of ſome tame fowl, birds, and ſome very young fleſh) milts, kidnyes, skin.

Meats made heavy, or made worſe than in their *own nature*, by preparation, keeping, and dreſſing; as *dryed*, *fryed* and *broiled* meats; meats *long ſalted*, or long kept until they begin to *decay*: bacon, hang'd *beef*, or long powdered; *old ling*, *ſalt cod*, *haberdine*, *pickled herrings*, *red herrings*, *pickled ſcallops*, *ſturgion*, *ſalt Salmon*, *hard cheeſe*, *hard eggs*, *toſted cheeſe*, *toſted bread* eſpecially if it be *ſcorched*; cruſts, *pye-cruſt*, *bread unleavened*, not

not well baked; meats over baked hard and dry; long kept, roſted *dry* or *ſcorched*.

4. *Light meats* and of quicker digeſtion, be ſuch as are more *ſoft* and *tender*, *rare* as it is oppoſed to *denſity*, therefore ſooner penetrated by the *ſtomachical ferment*; *ſucculent*, *volatil*, ſoon fermenting and yielding to *digeſtion*: As young tender fleſh; of *Mutton*, *Veal*, *Lamb*, *Kid*, *Pullet*, *Capon*, *Chicken*, *Turky*, *Conyes*, *Pheſant*, *Patridge*, *Plover*, *Woodcock*, *Heath-cocks*, and *ſmall birds*: *Whiting*, *Smelt*, *Oiſter*, *Flounder*, *Soles*, *Plaiſe*, *Thornbacke*, *Turbut*; *Trout*, *Carp*, *Pike*, *Bream*, *Perch* and ſuch like: *Rere Eggs*, *Milk*, and *Milk-meats*: But Milk, and Milk-meats, in a foul ſtomack do ſoon alter and degenerate, and therefore injurious to many Scorbutick perſons; but in clean bodies 'tis good food; eſpecially ſuch as are of a hot and dry body.

5. *Broom* buds, *Capers*, and *Sampire* are good ſauce to your meat, helps the *Stomack* in digeſtion, and is profitable for the *Spleen*; a part ſometimes chiefly affected in the *Scurvy*. Alſo *Oranges* and *Lemmons*, *Barberries*, and *Sorrel* help ſtomachical fermentation, and are good.

For

For *Drinks*, take theſe Obſervations: Drink not your *Beer* new, becauſe not yet fully purified by fermentation and clear; but rather ſtale and mellow, not ſharp: And reaſonable ſtrong, if your *ſtomack* be weak and declining: *Medicated* as your Phyſician finds the condition of your body; but without *Purgatives*. 6.

And it is very conſiderable, of what *Water* your *Drink* is made; for that there is great variety and difference in the goodneſs of *Waters*, being *impregnated* with ſeveral *qualities* from the nature of *Earth* through which it paſſeth; and ſeveral accidents that happen to *change Water* from its genuine *properties*, and make it impure and unwholſome, by carrion, filth, and ſuch like admixtures that may corrupt it. And from theſe cauſes *many places* are more diſpoſed to breed the *Scurvy* than others, from bad Water with which their Beer or Ale is made, and Meats dreſſed. And *Pliny* relates, that *Cæſar's* Army by drinking of bad Water but a few dayes, had the ſymptoms of the Scurvy. 7.

White *Wine* and *Rheniſh* is good for you to drink a glaſs or two ſometimes, 8.

to

to open obstructions, cleanse and whet the appetite, and promote fermentation. *Sider* also is good drink, if it be made of the best *Apples*; as *Pippins*, *Pearmains*, and such like; and that it be clear, having had good time to *ferment*, *separate*, and *purifie*: But withall have respect to your *stomack*, that it be agreeable, and desired by it: But if you have a cold, raw *stomack*, a warmer liquor will be more acceptable; as a glass of *Canary* sometimes, to fortifie the stomack and help digestion, is agreeable to the most: But Ale I do not approve of; such as commonly we have in *London*, and the Southern parts of *England*, high coloured, thick and muddy: But such *Ale* as is frequent in *Darbishire*, and the *Northern parts* being clear, citrine, thin, and well boyled, is wholsome *drink*.

Exercise. The next considerable for precaution of the *Scurvy*, is *Exercise* and *motion*. Which duly and moderately used is a good preservative from this *disease*. A sedentary slothful life makes the body to degenerate from its purity and vigour. *Corrumpunt otia corpus*. From hence *Defects* in *fermentation*, humours incrassate and obstruct; the *Spirits* being

being torpid, dull and inactive, do not rarify and *circulate* the *blood*, as when by motion they are excited and ſtirred up to their duties and performances; by *ſeaſonable exerciſe* the digeſtions are ſtrengthened, *obſtructions* opened, and *evacuations* more duly performed: and ſince an *idle Life* doth procure and promote this *Diſeaſe*, you muſt account it as your enemy, to avoid it.

Sleep. And like to this is the *indulging* of *ſleep* unſeaſonably, beyond its *limits* and due times, from whence neceſſary *evacuations* are reſtrained and put by their due accuſtomed times; and *ſuperfluous humours* accumulated and lodged, that otherwiſe Nature would have ſent forth profitably in good time; the *ſpirits* are made ſluggiſh, dull and inactive, and all the *faculties* injured.

Watching. But on the contrary, let not *watching* exceed its juſt times appointed by *Nature*, for from hence the inconveniencies are as great; eſpecially to ſuch *bodyes* as are *lean* and *ſpare*, or inclining to be *conſumptive* and *hectical*; by overwatching, the *ſpirits* are heated and tyred, the *blood degenerates* and turns

acrid or sharp, leaving its *balsamick* nature, and is disposed to a *colliquation* or separation of parts; the *vigour* of *nature* is hereby abated, and the *functions* depraved.

Passions of mind. *Passions* of *mind*, though in the last place accounted, are not the least, but principally to be regarded, and due order to be kept there for *preservation* from *infirmities*: For the *Soul* being the better and more noble part, from whose command and power bodily *actions* do proceed; of necessity if that be discomposed and disordered, the *instrumental* part must act irregularly and depravedly: The *distempers* and alienations of the *soul* from her genuine state of *serenity* and *quietude*, is of great disadvantage to *health*; impressing upon the body various *preternatural effects*, forming the *idea's* and *characters* of diseases upon the *spirits*, and by them communicated, conveighed, and propagated in the body: Likewise the *morbifick seeds* and secret *characters* of *diseases*, which lay dead and inactive, are by this *œconomical* disturbance and *perturbation* of *mind*, awakned, moved, and stirred up to *hostility* and action, which otherwise would have

have layen *dormant*: As by grief, fear or anger; *hysterical passions*, *swoonings*, *epilepsies*, &c. are often procured: And it is evident, and commonly observed by infirm and diseased people, how *passion* aggravates and heightens their *distempers*; and, according to the temper of their *minds*, will their *bodily infirmities* be aggravated or abated.

And of all the *Passions*, *Melancholy* and *sadness* do most dispose to this *Disease*, and aggravate it; the reasons are these:

The *Soul* in that *Passion* suspends and withdraws her *influence* and *emanative vertue*, which was wont to be enlarged and let forth into all the *faculties*, mediately by the *spirits*, her chief and approximate *Agents*; and the *Soul* in this state and condition of *sadness*, being as it were lock'd up and straitned within her self, darkned and overspread with a cloud of melancholy, does not *emittere & emanare*, send forth her wonted quickning *power*; by which *suspension* the *Spirits* are disposed to *cessation* from their duties, whereby the *faculties* are enervated and deficient in their *functions*.

The *Spleen* which is accounted the seat of this *Passion*, is chiefly debilitated and impedited in its *office*; the *spirits* hereby are fixed and deaded, *fermentation* cohibited and restrained, from whence *Scorbutick Effects* do ensue; for that by the benefit of *fermentation* our food is decocted, deserts its *crudity* and *fixity*; is raised and promoted to a state of *volatility*, that it may be fit for *nutrition* and *assimilation* into the substance of the body: But if *fermentation* be deficient and wanting, neither *chylification* nor *sanguification* can be good, but altogether depraved and vitiated.

CHAP.

CHAP. XI.

Determinations of the Scurvy, *concerning the difficulty and facility; hopes, or diſpair of Cure.*

BEfore I enter upon diſcourſe of the *Cure*, to lay down *fundamental Precepts* and *Rules* upon which it doth depend; I ſhall ſay ſomething as to the poſſibility of the Cure in *particular perſons*, in whom there is a great difference; that by examination every one may give a *rational conjecture* of their own condition and ſtate in this *Diſeaſe*, and be ſomething ſatisfied of the difficulty or facility of their *Cure*, before the undertake the *Courſe* and *Method* to effect it.

Many there are more curious and inquiſitive to know what their diſeaſe is, how *dangerous*, and whether *curable*, than they will be induſtrious afterwards for a *Cure*: If it be the *beginning*

of a diſeaſe, and not very troubleſome, they contemn and ſlight it: If it be of *long ſtanding* and difficult to deal with, they *diſpond* and have no hopes to part, being ſo long aſſociated together; and then give themſelves the liberty of their fancies in the diſcipline and order of themſelves, whether it be good or bad, for or againſt their *diſeaſe*.

Others more *rational* in their actions, deſire a *ſatisfaction* concerning the nature and *radication* of their *diſeaſes*, and ſtate of their bodies, that they may order themſelves to the beſt advantage, and to *oppoſe* their diſeaſes with that *ſtrictneſs* and *diligence*, in the uſe of good means, as is thought requiſite for ſuch a *Cure*.

In ſatisfaction to ſuch which are *Scorbutical*, that you may know in what condition you are, and the ſtrength of your *diſeaſe*, and what *poſſibility* of Cure, whether difficult or more eaſie: Examine your ſelf by theſe *queſtions*, and *prognoſtick determinations*.

1. What *functions* in the body are decayed and irregular, *more* or *fewer*; and whether ſuch *faculties* ſo injured, be *principal*; or of a *lower degree*:

For:

For, according to the number of *functions* disordered and debilitated, is your disease better or worse: And if they be from principal *faculties*, the worse also: Therefore look to the distinguishing *Characters* that belong to each *Faculty*, which will declare whether they perform *regularly*, or disorderly or deficiently: The *Characters* of *Rectitude* are the common signs, when every part performs its office according to the *custome* of *Nature*: The *Characters* of declension, and a depraved condition, are all such as declare the contrary.

2. The *duration* and time, how long such *symptoms* and *signs* have appeared and been manifest; for by how much the *longer* this disease hath been rooted in the body, by so much the more *difficult* it is to be *eradicated*; for that the *faculties* have so long deviated from their *rectitude* and integrity, and are more difficult to return, by the length of time *habituated* to the contrary. The *Scurvy* in the beginning is of easie cure, and soon yields to gentle medicines, properly appointed, with due orderly customs; but after it is fixed and radicated firmly by time, stamping

impreſſions of its depraved nature upon ſome principal parts, it is then more *ſtubborn* and *difficult* to be removed, and will require *more time* in the proſecution againſt it, although with *effectual* Medicines.

3. Whether the *Scurvy* be hæreditary; that is, deſcended of *Scorbutick Parents*, or their *Anceſtors*: And here you muſt know, that the *Scurvy* hereditarily derived, is worſe than that which is acquired by ill *dyet*, & bad air, melancholy, and unwholſom cuſtoms: For, if the *Scurvy* be worſe and more difficult to be removed in thoſe habituated to it, by length of time, acquired only by a declenſion and degeneration; then much more when it is radicated in the principles of Nature from the birth, and derived from their Parents or Anceſtors, it being then connatural to them *a principio, in principiis*.

4. What *ſex*, Male or Female: The *ſex* makes ſome difference in the *facility* or *difficulty* of a Cure; it being *worſe* in *Women*, who are more *obnoxious* to the prejudice of this diſeaſe than *Men*.

First, Becauſe they are of a *weaker* nature, more apt to degenerate and accumulate ill *humours*; whoſe conſtitutions are *ſooner changed*, being more expoſed by ſuch a *feminine debility*, not ſo able to reſiſt the *procuring* and *occaſional cauſes* of this diſeaſe, as *maſculine vigour*, and fortitude of their vital principles. Secondly, By reaſon of their accuſtomed *courſes* in Nature which are apt to be *ſuppreſſed*, decreaſed, ſuperabound, qualitatively altered, or be diſordered in *time*, that Nature hath appointed for that *purgation*, which brings much detriment; and this happens to *Women* from ſmall occaſions ſometimes; eſpecially infirm and diſeaſed bodies, which *aggravate* and *promote* their other infirmities, or inclination to ſuch. Thirdly, In reſpect of *Child-bearing* and the *weakneſſes* that attend ſuch a *condition*, which decay and abate their *vigour* and ſtrength; and in the time of their going with Child, the *Scurvy* doth prevail very much; partly for ſome of the preceding reaſons, as alſo that in ſuch a *condition* they cannot ſo well oppoſe the diſeaſe by that diſcipline and order as is required: And ſeveral I have obſerved

ſerved to die in Child-bed by *Scorbutick Feavers*, and ſome ſuffocated ſoon after a probable good Delivery, by a ſudden and great *fermentation*, occaſioned from the preceding Labour, and extraordinary internal *motions*.

5. In giving *judgment* of this *Diſeaſe*, the *age* of the perſon is to be conſidered, whether it be in *young* or *old*: In old age the cure is more difficult by how much the older, becauſe the *faculties* are declined in their *vigour*, and fall off from the integrity and *rectitude* of their natures ſpontaneouſly, from their *proneneſs* to deſiſt, and natural *inability* to a longer *duration*; and therefore are not to be *reſtored*, but may be *retarded* in their *ſpeed* of declenſion; their ill affects *corrected* and *abated*, not wholly *prevented*, being the *inevitable* conſequents of lapſed nature.

The *Scurvy* in *Children* argues an hereditary taint derived from their Parents, or the *vital principles* debile and weak in their *initiation* or *plantation*; or that their *Nurſes* were *ſcorbutical*, and tainted with this diſeaſe, from whom the *Child* hath *imbibed* and drawn-in impure *nutriment*, to corrupt the

the *principles* of its nature in the *infancy* and tender dayes, being then more apt to receive, and longer to retain any impreſſion, *Quo ſemel eſt imbuta* — In all theſe *Caſes* the *difficulty* of the Cure is advanced; and ſince ſo great a prejudice may ariſe to *Infants* from their *Nurſes*, therefore there ought to be a ſtrict and *diligent care* in the choice of them, and that by the approbation of an *able Phyſician* before the *Infant* is committed to them.

6. The *colour* of *ſcorbutick ſpots* declaring this Diſeaſe, is to be *regarded*; for that ſuch *ſpots* by how much they encline to *blackneſs*, ſo much the worſe: Denoting greater *degeneration* of the material product, or *extinction* of the aſſimilating faculty. *Quicquid eſt in effectu, præexiſtit in cauſa*; arguing the *faculties* to be very *enormous* and deficient; or the *materia ex qua*, and nutrimental *object* to be of a very depraved and degenerate Nature not to be reduced.

7. That the Cure is more *difficult*, and will be *longer* in effecting to thoſe that are *irregular*, *live high*, looſe and *careleſs*; not obſerving *laudable Cuſtoms*, and ſuch a Diſcipline as is required

to

to oppose the Disease: As also to such, whose *low condition* and *inability*, constrains them to a bad *dyet*, inconveniencies and ill *customs*, which promote and aggravate this *Disease* also.

8. Those which are reduced to a *deplorable State*, and not *curable*; may receive much *help*, and *palliation* of many troublesome *Symptoms* that attend the disease: So that their *life* may be more *comfortable* and the disease *check'd* though not *cured*.

9. The *Scurvy* supervening long *feavers* & *chronick diseases* that have been ill *Cured*, or *palliated* with *large* or frequent *phlebotomies*; does commonly *præcipitate* the *patient* into a desperate *consumption* or *dropsy*.

10. The *Scurvy* habituated by *melancholy*; is not cured by *medicine*, except *melancholy* be deserted.

11. The *Scurvy* introduced by other *primitive causes*, and removed; if *melancholy* supervene and *continue*, the cure is *impedited*: Because this *passion* puts a damp, or suffocates the *spirits*; *enervates* all the *faculties*, and *incapacitates* nature to *co-operate* with the means.

12. Linger-

12. Lingering ſlow *Feavers*, whether *continual*, or *intermitting* called *agues*, having dependance upon the *Scurvy* (as very frequent) are not cured, if the *Scurvy* be neglected: And therefore it is, that ſo many pine and languiſh under theſe *ſickneſſes* a long time, becauſe the *Scurvy* is not diſcerned.

13. Thoſe in whom the *Scurvy* is deeply *radicated*, muſt expect a longer time, and more diligence in the uſe of means to be uſed, then thoſe of a *ſlighter taint*; and therefore in meaſuring out the time for *Cure*, you muſt extend it according to the *proportion* of the diſeaſe.

14. That the *Scurvy* is more *contumacious* and difficult to be *cured*, in ſome places than others; from ſome common *procuring cauſe* conſtantly promoting this *diſeaſe*: As where the *Scurvy* is *endemical*. Conſonant to this is *Martinus* his *aphoriſm*: *Qualis aër, aqua, & ſors vitæ; tales in corpore generantur ſpiritus ac humores, quibus habitus ſolidarum fere partium reſpondet.* *Martinus de ſcorb.*

15. Dr. *Willis* gives this *prognoſtick* of the *Scurvy*, concerning the Cure.

'This disease being but of late stand-
'ing, (sayes he) so long as the impu-
Dr. Willis his prognostick. Chap. 6. 'rity lyes only in the blood, not yet
'communicated to the Brain, and Ner-
'vous parts, nor raised durable symp-
'toms in the solid parts, is often per-
'fectly cured: But if it takes deeper
'root, is propagated in the sensitive and
'motive faculties, and there does beget
'convulsive motions and pains, and
'moreover does shew its virulency, by
'the putting forth of spots, wheals or
'pimples, and by the wasting of the
'gums, and rottenness of teeth, with
'other inseparable declaring signs; then
'this disease is scarce ever perfectly cu-
'red: But the chief business of physick
'is to mitigate the most urgent symp-
'toms, and stop their encrease.

16. The *difficulty* of the *Cure*, oft-times lyes more in the *intractableness* of the *patient*, than the *contumacy* of the *disease*: For many a one might be *Cured* that is not, from their impatience, indiscreet niceness and aversion to *physick*; refusing due *obedience* to the *Physicians* rules; slightly or insufficiently using his *medicines*.

CHAP.

CHAP. XII.

The Therapeutick or Curative part examined.

THe common *method* in curing this Diſeaſe, is carried on by theſe intentions: *Preparation* of the *ſcorbutick* matter; opening of *obſtructions*; *evacuation* of the *morbifick* cauſe; and *roboration* of parts.

For the firſt intention, namely Preparation, it is performed (as they ſuppoſe) by medicaments that are attenuating and inciſive, and by a more peculiar property do reſpect the malignant Cauſe: And ſuch medicines are compounded of theſe ingredients, *Fumitory*, *Spleenwort*, *Germander*, *Cichory*, *Borrage*, *Bugloſs*, *Harts-tongue*, *Enulacampane*, *Squils*, *Bark of Tamariſk*, *Cappar roots*, *Polypody*, *&c.* Of which *decoctions* are made, and drank ſome dayes before purging, to prepare the *morbifick humour*, and make it more fit for *evacuation*.

That

That ſome of theſe rightly uſed may be good againſt the *Scurvy*, I do not deny; but, under the notion or *preparation*, is a deluſion of *judgment*: Firſt, becauſe there is no *poſſibility* of reducing this *degenerate ſcorbutick* matter into a good *ſtate* and condition, *A privatione ad habitum non datur regreſſus. Axiom.* But it muſt be exterminated and caſt off.

Secondly, for that the *humour* which you intend to prepare, is *occult* and unknown in its *proprieties* (by your own determination;) the *preparation* then is but a blind buſineſs, and a ſhooting at random. Thirdly, for that there is no *purgative* which attracts, *elective*, this humour you intend thus to prepare: wherefore no *preparation* is available or beneficial, diſtinct from that which is antiſcorbutical and curative.

The ſecond intention is opening of obſtructions; and that is included in *antiſcorbutical* medicines, which are *aperitive*, *rarifying*, *volatiſing*, and of a *fermenting* Nature: But if it be meant only as a *previous diſpoſition* to the Cure, I think it more nicely diſtinguiſhed, than neceſſary to be obſerved.

The

The third *intention* is *evacuation* of the *morbifick* cauſe; and that is ſuppoſed to be performed by *Phlebotomy* and *Purgation.*

Phlebotomy I cannot approve of (except there be a *plethora* urging) for that this Diſeaſe for the more part is generated and depends upon the defect of *fermentation*; which rather requires addition of *ſpirits* to help the laſſated *vires*, *exciting* and *aſſiſting* their wonted *operation.* Dr. *Willis* in the matter of *bleeding* is more liberal than the unreformed *Galeniſts*: His words are theſe? *Cum enim liquor ſanguineus valdè impurus evaſit, nullo remediorum genere certius emendatur, quam crebra & parca extramiſſione: Quippe, ſanguini veteri corrupto, quoties educitur, recens melior & defæcatior ſuccedit.* 'When 'the maſſe of blood is very foul, no 'kind of remedy purifies it ſo certain-'ly, as frequent letting it out, a little 'at a time: Becauſe the old corrupt 'blood as oft as it is let out, new and 'better ſucceeds in its place.

Dr. *Willis his opinion of bleeding in the Scurvy. Tract. de Scorb. Cap.* 7.

This *poſition* deſerves *examination*, for as much as *phlebotomy* is a *grand remedy* nicely to be dealt with, and warily to be uſed, upon *urgent occaſions*

and not otherwise. The *Blood* may well be accounted the *treasury* of *Nature*: for as this *store*-house is *full* or *empty*, *good* or *bad*; the man is chiefly adjudged to be in a good or bad state, *Ut signum & causa.* The dependences from hence, are so many and so great, that much *caution* and *circumspection* is to be used in the *diminution* of it. I am not so far an *Anti-phlebotomist* as to *deny* and *decry* it in all *cases*; as when some great *efferation* and *effervescency* of the *blood* does threaten the *life*, if not presently *checkt* and *allayed*: When by *plethory* and *turgid ebullition*, the person is in danger of *suffocation*: But the *Scurvy* is no *acute disease*, does not require such *haste* in the *ordinary* course of it; but that *other means* (no way injurious in the *admission*, nor ill *consequents* attending) may be used to answer that *intention* of cure, for which *Bleeding* is appointed.

Scolzius, a collector of *Galenic doctrine* into *Aphorisms*, gives their judgment of *phlebotomy*; which although too much *indulging* this *evacuation* in most *cases*, yet in the *case* now in hand altogether forbids it. *Boni sanguinis paucitas, cum multis malis succis renuit phlebotomiam.*

Aph.

Aph. 54. de Phlebotom.: *Little good blood* and much *bad*, do not admit of *phlebotomy*. And in the 90 *aphorism* following he saith: *Quando color corporis malus est, phlebotomiæ usus improbatur. Aph.* 90. Meaning thus much; that a *bad complexion*, declaring the *blood* to be *foul*, is not amended by *phlebotomy*, but made worse. And the 103. *Aphorism* following, is to our purpose: *Reconvalescentibus vena non est secanda, quia parum habent boni sanguinis. Aph.* 103. Sect. 3. Whereby we are taught to be very *careful* and *sparing* of the blood, in those persons that have but a *little* that is *good*: and this is the *sense* of the *Galenists* that often bleed too much; And are accounted most *prodigal* of the blood. *Scolz. Aphor.*

The *Helmontian* and *Chymical Physicians*, are so sparing of the blood, that they will not open a *vein* scarce in any *case*. We will consult *Sennertus* in this point; a *judicious* and *moderate* writer, carrying an equal hand between the *Galenists* and *Chymists*: in his 6. *Chap. de Curatione Scorbuti.* Concerning *phlebotomy* in the *Scurvy*, although he does admit it in some cases, yet he is *sparing*; and *disallows* it, if the

blood be very bad. *Parcius autem sanguis evacuetur; cùm largiorem sanguinis missionem hic morbus respuat, ut Eugalenus scribit. Si verò morbus jam radices egerit, & sanguini tam adsit magna corruptio, ac cacochymia, cum nullâ sanguinis abundantia; eaque ita totum corpus occupaverit, ut jam maculæ efflorescant, & alia externa signa in corpore hinc inde appareant, vix venæ sectio tentanda, ne, puriore & subtiliore sanguine effluente, & crassiore illo ac viscido subsistente, vires ægri debilitentur: Sed tum potius ad cacochymiæ Scorbuticæ præparationem & evacuationem, primis viis tamen & ventre prius evacuatis, attendendum.* You see that *Sennertus* does not chuse *Bleeding* for the best *cleanser* of the blood when it is very *foul*, but would have it done by other means. Not only the *Hermetic*, but the *Galenic* doctrine forbids *phlebotomy* in the case, Dr. *Willis* is very *positive* for it; and he layes a great stresse upon this *remedy*, as the most *certain* to *depurate* the blood.

Sennert. tract. de scorb. Chap. 6.

But I shall not oppose Dr. *Willis* with *Authority* only; if *Authority* were *argument* sufficient, his were as *prevalent* with me as any other: But my *reason* and

and *experience* commands me to *dissent* from him in this point, which is as followeth:

If it be true, That the blood *ferments* to *depurate* it self from *heterogeneous admixture*; and that nature in her *vigour* and *strength*, needs no *art* to assist her in this *daily work*: Then, upon an *abatement* and failing herein, Where must we fix our eye to give an *assistance*? To *promote* this work of a good *sanguification*, and *depuration*? It must be done after this manner, and by these *intentions*: To *vigorate* nature, to *assist* the *faculties* that are *deficient* and *decayed*, or *impedited* in their *functions*: To remove *impediments* and *vitious degenerate* matter, *in primis viis*: To open the *ductures* and passages that Nature hath appointed, for *extermination* and *excretion* of *excrementitious* degenerate *humours*; and to provoke nature to *separate* and send forth any *morbifick* matter, this way or that way, most *commodious* for carrying of it off; as a prudent *Physician* shall think fit, and judgeth most *convenient* in the *case*. Following the advice of this good Old Man, ἃ δεῖ ἄγειν, ὅποι ἂν μάλιστα ῥέπῃ, ταύτῃ ἄγειν, διὰ τῶν ξυμφερόντων χωρίων. And this *Hipp. aphor.*

is the *main buſineſs* of a *Phyſician*; and hereby nature will be *relieved* and reſtored.

But what will *Phlebotomy* do? It makes no *ſeparation* of *morbifick matter*, but ſends forth good and bad together; it does not *quicken* Nature and give *ſtrength*, but it *abates* and *leſſens*, by giving *vent* to the ſpirits: And therefore moſt people, after *bleeding*, do ſenſibly find their *ſtrength abated* and are more *feeble* than before. What is the *intention* of Bleeding then? *Phlebotomy*, *per ſe*, does only make a *depletion*, abate the quantity; but, *per accidens*, checks the *ebullition* and *fermentation* of the blood when it is too great and *furious*, gives *ventilation*, cools and allayes it: Therefore when the *veſſels* are ſwelling, and the blood *turgid*, hot and æſtuating; to *prevent* a miſchief coming, or *allay* a *ſtorm* and *tempeſt* in the blood, wherein is *eminent* and imminent danger threatning the life, *Phlebotomy* is a ſafe and good *remedy*: But this is not our caſe in curing the *Scurvy*.

It will be granted, That a *Scorbutick habit* of body, for the moſt part does *ariſe* from, or is *accompanied* with, a

de-

deficiency, or *vitioſity* of fermentation in the blood: Both which *caſes* (in my *opinion*) does refuſe *Phlebotomy*, as *unneceſſary*, if not *injurious*. For, if fermentation be *deficient*, through the *imbecillity* of nature, wanting ſpirit and vigour, to give its due *fermental* motions; *Phlebotomy* will not quicken and *vigorate* nature in that work: But on the contrary by *impoveriſhing* her ſtock and emiſſion of *ſpirits*, ſhe is *enfeebled* more, and made more *incapable* to *circulate* and *depurate* this vital ſtream.

But in *caſe* of a *vitious* and *corruptive* fermentation, we can expect as little aſſiſtance from *phlebotomy* as in the other: For, *Bleeding*, although it make ſome little *alteration* in *ſanguine*, by cooling; yet, it is able to do nothing as to rectify the parts that do *ſanguificare*, and are *contributarie* to that work; the office of *ſanguification*, being *degenerate* in that function, is not *reſtored* and *rectifyed* by a *privative* remedy, as *Phlebotomy*: But it muſt be ſomething elſe that hath a *poſitive influx* upon the *faculties*, to reduce and reſtore them to their wonted *regular* duties.

Besides, A *degenerate* and bad blood does arise oft from the *insufficiency* and *depravedness* of the *prævious* alimentary matter, of which blood is made: And then the *fault* is not in the *blood* or the office of *sanguification*, but in the *preparatory* offices and those *parts* of the body *discrasyed*, upon which *phlebotomy* hath no *influence*, nor *possibility* to *rectifye*. If the Stomack makes a bad *digestion*, and *transmits* a naughty juice, to the *office* of *sanguification*, to be *transmuted* and *tinctured* into blood; and hereby the crimson *stream* becomes *impure*, because the *errors* of the first *digestion* are not amended by the *subsequent*: Now, How long, or how often may a man *bleed* before the *stomachical digestion* be reduced to good order; which here is the cause of an *impure* and bad blood? Truely, he may *bleed* and *bleed*, to be *worse*, and *worse*; but he cannot bleed, to be the better for it.

Aphorism.

But it may be answered; that *Bleeding* does not go alone, but is *accompanied* with other *means* requisite for such a *case*; as *digesting* and *cleansing* medicines also, to procure a good *chylification*.

Now

Now, You propoſe ſomething to the *purpoſe*. I like well your *abſterſives* and *digeſtives*: but all this while, I cannot ſee how *bleeding* comes in as a *remedy* in the caſe; or to what *purpoſe*, except to do *miſchief*: Let *bleeding* alone; but proſecute with *abſterſives* and *digeſtives*, to ſet the *ſtomack* right firſt, that there may be a good *fermentation* there; then, for a *depuration* of the blood, *excite* Nature if ſhe be *ſluggiſh*, and *quicken* the *faculties* to evacuation by the *Emunctories* and vents of the body; and then your *buſineſs* is done without *bleeding*, much better then with it.

But let us *examine* a little farther, What *good* can begotten out of *bleeding*: becauſe it is pronounced a *cardinal remedy* againſt the *Scurvy*; and very frequently uſed, and *repeated* in the *cure* of moſt *diſeaſes*.

Firſt, I muſt ſay; The maſs of blood is not *depurated* by *phlebotomy*; let out as much as you will; *equal* parts of *good* and *bad*, will remain behind ſtill: What is the *benefit* then you can expect from it? You will ſay then; The *old blood* being let out, *new* and *better* will ſupply its place. *Quippe ſanguini veteri* Dr. *Willis de corb. & Chap.* 7.

& corrupto, quoties educitur, recens melior & defæcatior ſuccedit.

First, by this *aſſertion*, the blood has no ſhare in *tinging* the *Chyle* and making *blood*, as ſome do affirm; and as it is common in nature, the *greater* to *prevail* upon the *leſs*, to alter and change into its own *likeneſs*: Elſe the *old* blood being *foul* and naught, will alſo *tincture* this new *chyle*, *deprave* it and make it like to its ſelf: For, the *additional chyle* gradually *ſupplying* the blood, is very ſmall in quantity to the whole *maſs* of blood; and therefore can make but *little alteration* in the *blood*: But the *blood* may ſoon change that little *advenient Chyle*, and make it *impure* as the *blood* is.

Secondly, The *probability* of *good* ſucceeding, is no more *likely*, after *phlebotomy*, than before: For as much as the *cauſes* that *produced* bad blood before, are now in the ſame *power* and *force* after *bleeding*, as before *bleeding*: For, *phlebotomy* gives no *aſſiſtance* to the *office* of *ſanguification*; or to the *parts* operating *prævioufly* and *preparatory* to it; or the *parts* contributing to its *conſervation* and *depuration*: How then can this ſtand with *reaſon*, that *Phlebotomy*

tomy should be a certain *remedy* for *cleansing* the *blood*, when it hath no *propriety* of *rectifying*, or *vigorating* the *parts* appertaining to the blood; from whose *deficiency* and *dyscrasy* the blood became *foul* at first. *Posita causa, poniter causatum.* These parts having no *emendation* by *bleeding*, the blood remains in the same *state*, and equally *obnoxious* to *corruption* and a *degenerate* supply as before.

Thirdly, If I should ask the *question*, How much *blood* must be let out, before all the bad *blood* be *emptied*; surely a *prodigious quantity* must be *allowed* to be vented, before all the *foul blood* would be spent; considering the *gallons* of blood that is in a mans body; as also that there is a *dayly supply* brought in: Which additional must be tainted too, coming *into* and *admixing* with an *impure mass* of blood. This would prove a very *tedious* way of *purifying* the *blood*, if there were any *certainty* of it in the *end*.

But to this it may be answered: That it is not intended by *bleeding*, to let out all the *blood*; but, when some of it is gone, *Nature* will be able to *deal* with the rest, and *purifye* it, with *good helps* by *medicine*. This

This seems a *plausible Excuse*, yet not *sufficient* and *valid* to support *phlebotomy*. You do not consider that in taking away the *blood*, you take away a *part* of *nature* too. If you can *separate* the *blood* from *Nature*, that is, take out the *blood*, and leave the *spirits*, which is the *strength* of *nature*, then I am for you and *bleeding*: But this cannot be done; for, with the *blood* goes also the *spirits* and *strength* of *nature*; that the *case* is the same now as it was *before bleeding*: The bad *blood* is *abated*, and *Nature* is *abated* also. *Jam sumus ergo pares.* Nature now is no more able and *accommodated* to purify the *blood* than before.

But good *medicine*, you will say, can *restore* and *fortifye Nature* again: Yes that is true; but to do *what*? To help her self in the *restoration* of what was *lost*, and *depuration* of the *remainder*. I see now, where the *stress* of the *cure* will lye; Upon *nature* and other *good means*, not *bleeding*: At the last, though *nature* be*weakned* and impoverished by *bleeding*, yet with *other good helps* she must do the *work*, or it must not be done: And why could not *Nature* do it before *bleeding* with *good helps*? Every whit

whit as *well*, in my opinion, and *better*.

Phlebotomy is not *indicated* properly and directly, by the *quality* of the *blood*, but by the *quantity*: Therefore, in ſome ſpecial *caſes*, as of *Plethory* and *Turgency* of the *blood*, *phlebotomy* may be *adminiſtred* with good *advantage*, as a preſent *remedy* in an *acute diſeaſe*, that will not ſtay for *means* of a *leſs ſpeed*: But this is not our *caſe* in hand; we are now upon a *Chronic diſeaſe*, conſidering of *depurative* means for the blood, *quatenus* impure; *præciſely* and without reſpect to *ſpecial caſes*. If there be a *plenitude*, and the blood apt to be *ſtagnant* and *obſtruct* in the ſmaller *veſſels* and *ductures*, hindering a free *circulation*: Or ſome great *inflammation* and *æſtuation* cauſing great *diſquietude*, *reſtleſneſs*, *inſomnolency*, and eminent danger; in *ſuch caſes* bleeding may be allowed: But as for *emendation* of the *blood* in a *Scorbutick* impurity, *præciſely* conſidered in its own *nature*, (and not peculiar *adjunct caſes*;) that *Scorbutick degeneration* of the blood, does not *indicate bleeding*, but *depuration* and clenſing, which bleeding cannot perform.

If

If we look upon the *nature* of the *Scurvy*, at leaſt the moſt *frequent caſes* in that *diſeaſe*; we find the *ſpirits* depreſſed, or *depauperated* and *exhauſted*; the *blood degenerate* from a *balſamick* ſtate, become *acid*, *ſharp*, and *ſerous*; abounding with a *fixed ſalt*; fermentation *inſufficient* and dull; the *Digeſtions* languid or *depraved*. In this *condition* of body, what will *bleeding* do? *Advance* and ſet forward the foreſaid *evils*: It *reſiſts* none, it *aggravates* all: Therefore ſay I, *vitioſity* and *impurity* of *ſcorbutick* blood, conſidered *abſtractly* from other *accidents*, and in its own nature, does not *indicate phlebotomy*, but *depuration* by other means, *proſcribing* the *impurity* by the common *ductures* of nature; and by *fortifying* the *digeſtions* for an *elaborate balſamick* and plentiful *ſupply*.

Objection. But it may be *objected*, That there is two different *conſtitutions* of body in *Scorbutick perſons*: The one *cold*; the other *hot*, of a *febrile* temper; and although the *firſt* may not ſo well *plead* for *phlebotomy*, yet the latter does much require it, *gradually approaching* towards a *feaver*; or may be called a conſtant *Feaver in gradu remiſſo*: Such perſons

perſons are to be *cured*, like thoſe in a *Feaver*, by *Coolers* and ſuch means as *allay* the fiery *heat* of the blood, which frequent *phlebotomy* does well perform. And Dr. *Willis*, in adapting medicines for his *deſign* of *cures*, diſtinguiſheth theſe two *conſtitutions*, and calls the one *Salino-ſulphureous*; the other *Sulphureo-ſalinous*: And theſe are two *capital characters* that divide his *medicines*, being *accommodated* to theſe two *conſtitutions*.

To which I anſwer: Firſt, that this *Anſwer.* ſeeming *diverſity* of *conſtitutions*, does not ſo much *point* at, and *indicate diverſity* of medicines and *method*; but ſhews that ſeveral *individual* natures are differently affected with their *diſeaſes*: The one lyes more *ſubmiſſive*, *calm* and quiet, lets the diſeaſe prevail without *ſtrugling*; the other, not willing *ſuccumbere*, to be trodden down, does *inſurge* againſt the *morbifick cauſe*; the ſpirits *æſtuate* and kindle, being diſturbed and *diſquieted* in the execution of their *functions*. So that the *morbifick matter* may be the ſame, and the *parts affected* the ſame: but the difference is, one *ſubmits* being more *ſluggiſh*; the other more *active*, *contends*. And this

this is *Peculiaris natura*, individual *propriety*, and not different *caſes* of the *diſeaſe*, indicating *diverſity* of *medicines* and method: and therefore, if there be no other *individual propriety* but heat; nor *ſpecial complication* of diſeaſes much to alter the caſe; then, the *medicines* and the *method* need not be altered; but the ſame *medicines* are as truely *appoſite*, and *appropriated* to the one as to the other.

Secondly, The *conceit* of adapting *medicines* to hot and cold *conſtitutions*, ariſeth from an *erroneous* apprehenſion of *Feavers*, and a great miſtake in the *eſſence* and nature of them; not diſcerning that the *calor febrilis* ariſeth from a *principle* different from the *materia morbifica occaſionalis*: This febril heat does not ariſe from a *ſulphurous* matter inflamed, as is ſuppoſed: Which begets many *abſurdities* in the cure of *diſeaſes*; hence the *barly waters*, the *cooling Julips*; and repeated *phlebotomyes* to quench this *flame*: For this *febril* heat, is but the *æſtuation* of the *Archæus* according to *Helmont*, which is the *impetum facieus* of *Hippocrates*, that does contend and inſurge againſt any *hoſtile morbifick Matter*: and this

Helmont

Helmont hath well noted, *Accendit nimirum se ipsum Archeus, in nisu, quo cuperet expellere materiam occasionalem, tanquam sibi impactam spinam. Hanc autem quicunque aufert, sive id fiat per calida media, sive per temperata, sive demum per frigida, is morbum a radice tollit, & est naturæ quasi indifferens: quia eo ipso sedatur, cessatque thymosis Archei: Quamobrem calor, ut cunque præter naturam auctus, indicium possit esse febrium, non est tamen ipse febris, nec illi ideo inter medendum magnoperè est insudandum. Hinc nempe Hippocrates serio monuit, Calorem & Frigus non esse morbos, ut neque morborum causas: Sed causas (nimirum occasionales) morborum, esse amarum, acre, salsum, ponticum &c. Spiritum vero esse eum, qui impetus omnes facit.* Helm. Tract. de febr.

He that is acquainted with, and rightly understands this *doctrine*, will not be so ready to let out the *spirits* by *phlebotomy* upon trivial *occasions*: He preserves the *vital stream* (unless extreamly urged) and does *sedare*, allay and pacifye, the *æstuating* kindled *spirits*, by administring what is proper to eject and throw out the *morbfick matter*, the enemy and *disturber* of the

peace. Nor is he troubled about *hot* and *cold medicines*: Nature is not more offended at *hot medicines* in the time of *ſickneſs*, than at *hot meats* in the time of *health*. Febrile heat is as well quenched with *hot things*, as with *cold*; nay much ſooner: For *coolers* only, are but like the ſprinckling of *water* upon *fire*, which burns the *fiercer* for it afterwards; *Coolers* do but caſt a *damp* for the preſent, makes a *ſuppreſſion* of the *heat*, and it burſts out again: But *hot medicines* that have *ſpirit* and *life* in them, aſſiſt nature in ejecting of the *peccant matter*; which being thrown out, the *ſpirits* return to their *reſt*, and *cool* of their own accord, being freed from the object of their *fury*: And therefore one good *Sudorifick medicine* checks a *Feaver*, and *cools* the body better than ten *Julips*. And if it prove ſo in the greater diſtemper (a *Feaver*) it will perform the ſame in the *leſſer*; where the body only is *denominated* of a *hot conſtitution*. The argument is, *a majori ad minus*.

But, by the way, I muſt tell you, wherein I differ from other *Phyſicians*, when I grant my *patients* cooling drinks, as *Whey*, *Sider*, or ſuch like when,

when desired in *Feavers*, or *hot bodyes*: *They* lay a great *stress* upon *Coolers* as *principal* means against the *disease*, and to *reduce* the *distemper*; *I allow* them, not as *physick* against the Disease, but as *refreshment* to Nature, being delighted therewith and coueted: So that I do not *impose* them as of *necessity*, because the *disease* does not require it; but observing the *propriety* of the body being *comforted* and *refreshed* with such or such *cooling liquors*. So that these are not given as *medicine* (for they *cure* not; nor is *heat* to be regarded otherwise than as *signal*) but they are allowed as *refreshment*. A labouring man that toyls and *heats* himself; must have drink to *refresh* him: Even so it is with a man, in a *Feaver*; his *spirits labour* more, than at another time; and more *thirsty*, requiting *drink* more, than at another time, and it must be such as *delight* him, that nature does *desire*; not *Barly water*, *Julips*, and such *Slops* that the patient *nauseats* and gives him no *satisfaction*.

But to return to our subject *Phlebotomy*: When nature, troubled at any *morbifick matter* lodged in any *part* as an *injurious guest*, begins to *fret* and to

be *disquieted* ('tis nature that *contends*, and makes the *disturbance*) the *spirits* kindle, raise their *fortitude* and power to *resist*, to *exterminate* and cast out this inbred *Enemy*. This is the *case* of preternaturally *hot constitutions*, signally *intimating* that the *spirits* are *disturbed*, and offended at some *morbifick cause*. What good does *Phlebotomy* in this *case*? Truely it *damps* and *discourageth* Nature, abates her *courage* and *strength*, puts her quite off her *purpose*, checks, *allayes*, and *dissipates* the *spirits* that were ready drawn up to *encounter* the *enemy*; expecting the assistance of *Art*, instead whereof she is *knockt* down by *Phlebotomy*: The *patient* now finding the *conteſt* over, or the *disturbance allayed*, thinks he is well *cured*; but alas he is not aware that the *morbifick matter* is left behind still; it did not go out by *bleeding*; but *Bleeding* ceased the *quarrel* for a time, until Nature *recruits* again and *recovers* this loss.

But some may say, 'Tis well that *Phlebotomy* does some good for the present; gives ease and *abatement*, until good *medicines* take away the *cause*, which is to be done afterwards: But if I should

ask

ask why could not this *cauſe* be taken away before *Bleeding*, as well as *after Bleeding*, I doubt the anſwer would not be *ſatisfactory* but very *imperfect*. And farther, although *Phlebotomy* were allowed as a *palliative medicine* to pleaſe the patient, in the *mitigation* of ſome troubleſome *ſymptoms* that attend his diſeaſe; and make the *Phyſician* acceptable to him upon his firſt *adminiſtration*; yet this does not countenance *repeated Phlebotomies*, under the *notion* of *depurative remedies*, and the beſt *curative* means, for a *Scorbutick impurity* of the blood.

Indeed ſometimes, the *impatiency* and *peeviſhneſs* of the *patient*, urging for a *ſpeedy cure* or preſent *allay* of ſome troubleſome *ſymptoms*; forceth a *Phyſician* to *palliate* their infirmities by *Phlebotomy* (being an eaſie and cheap remedy, and the time given him but ſhort) that might *ſubſtantially* and *firmly* be effected by other means in due time. But it is one thing to be *urged* to *Phlebotomy*; another, to plead for it.

Plethora Sanguinis is the adequate *indication* for *Phlebotomy*; but being in other caſes without urgency uſed as a

curative *remedy*, argues a *deficiency* and *want* of good *Medicines*: And then *Phlebotomy* comes in, not properly *indicated*, but *substituted* in the vacancy of *proper Medicines* and answers not *directly* and *per se*, the *scope* and *intention of cure*, but only *palliativè*, and by way of *mitigation*.

Some there are that appoint *Bleeding*; not considering so much an *indication* for it and *necessity*, as the custome and present *fashion*: Thinking their *method* of *cure* not *compleat* except this come in *course*: Others fall upon *Bleeding* not prompted to it by *indication* but necessity of *variation* and *tryal*; for, having used several *medicines* with little *success*, they pitch upon *Bleeding* as the last *refuge*; and that failing too, think they have *tryed* all means, and done what comes within the compass of *Art*,

Helmont. *Helmont* sayes, and that very truely; *Natura corroborata, est morborum medicatrix*: If this were rightly considered in the whole *practice* of *Physick*, there would not be such a *frequent* recourse to *enervating Phlebotomy*,

If ever *blood* may boldly be let out, it is in such a person, whose *crases* of principal *parts* are *firm* and good, that

their

their *faculties* do perform in the *rectitude* of their *Office*; ſo that, an *exhauſtion* of blood being made, a *new ſupply* and good may probably follow: But if the *parts* be *dyſcraſyed*, depraved, and out of order, what can you expect from their ſupply: *Cujus cauſa mala eſt, id ipſum malum.* Now this is the *caſe* of *Scorbutick* perſons, in whom the *Scurvy* hath taken root; ſome *principal part* or parts appertaining to *ſanguification*, *prævious* or *conſervative*, is vitiated, decayed or much *altered*, from whence the production of *impure Scorbutick* blood is the *conſequent*; and from thence many other *Scorbutick ſymptoms* do ariſe.

Feavers are accounted in the number of *primitive cauſes* that *introduce* the *Scurvy*: Now in the cure of *Feavers*, the *leſs Blood* is let out, the *leſs danger* there is of a conſequent *Scurvy*; for, as the *Feaver* by *æſtuation* and preternatural *fermentation* conſumes and wears out the *ſpirits*, leaving the blood thereby *impoveriſhed* and *diſpirited*, loſing its *balſamick properties*; ſo likewiſe *Phlebotomy* makes a *profuſion* and *exhauſtion*, which produceth the ſame *effects*. When a *Feaver* ariſeth in the *Blood*,

comes ſuddainly and *furiously* like a *ſtorm*; then *Phlebotomy* may tolerably be admitted as an *allay* and check to the *tempeſtuous fermentation* until other means take place: But, *repeated Phlebotomy* argues *inefficacious* languid *medicines*; elſe the *Phyſician* need not have recourſe to this *palliative remedy*, of pernicious *conſequence*: He that *bleeds* and *bleeds*, in a ſickneſs, is more beholding to Nature in his recovery, than to his *Phyſician*.

Indeed, ſome there are that make *Phlebotomy* their *grand remedy* in *Feavers*, and repeat it ſo often as any febrile heat does manifeſt: And *Nature*, being thus ſpent and ſtrength *exhauſted*, does *ſuccumbere*, leaves off contending, lies *proſtrate* and *quiet*: And now the *Phyſician* thinks he hath *conquered* the *Feaver*; rather it may be ſaid, he hath *conquered Nature*, and laid her flat: For, that *ſpirit* of life which warms and *preſerves* natural *heat* in *health*, is the ſame that *æſtuates* and grows *hotter* in *ſickneſs*: So that aiming only, or chiefly to allay this *heat*, is, endeavouring to ſuppreſs *Nature* not the *diſeaſe*; for, *cauſa peccans in febri, non calet ex ſe*, according to *Helmont* and the truth. In ſhunning

Carybdis,

Carybdis, he dashes upon *Scylla*; he feared so much the present danger of the *Feaver*; he *precipitates* the *patient* into a contumacious *Scurvy*, and lingering *Consumption*; and indeed what not? 'Tis a long time, before a person so *cured* of a *Feaver*, recover his *strength* and *integrity* of his *faculties*, if ever he wades through that *sickness*: And by such strange usage of the sick the *Scurvy* so frequently takes place after *Feavers*, from these indirect wayes of curing. My self in the year 1650. being sick of an *acute* Feaver in *Mary-land*; was indiscreetly bled by my *Physician*, in the *declination* of the *disease*, to my prejudice.

The *Galenists* are *religious* expecters of a *Crisis* in *Feavers*; but if you *bleed* much, your *crisis* will be long in coming: I fear your *patient* may be *dead* first; or at best, you introduce a *Chronick disease*, the *Scurvy* is the *consequent*: Not that I deny *Crises*; but I blame unnecessary and pernicious *Bleeding*. A good *crisis*, or *critical* evacuation, is a sign of *victory*, that Nature hath *conquered* and gotten the *mastery* of a disease, does *expel* and cast out the *morbifick matter*; and Nature accord-

according to her power is continually working and striving to *effect* this for her *relief*: And for performing and effecting this *design*, the more *vigorous* and strong Nature is, the *better* will be the event. *Si ipsa sibi natura debeat esse medicatrix, tantóque felicior, quò fortior*; sayes *Helmont*. But bleeding *debilitates* and exhausts the *strength* which should *contend* with the *disease*: How can you then expect a good *crisis*, when Nature is *enfeebled* and *checkt* in her *encounters*; and by the *strength* of Nature, the *crisis* is procured sooner or latter, as Nature is *strong* or *weak*.

Helmont.

But you will say, What? Shall we not *bleed* in a *Feaver*? Must we not cool the blood, when it's *hot* and *fiery*? In some *cases* and *plethorick* persons, it is lawful; but, to appoint it so *generally* and *unnecessarily*; when other *means* may better be used; to *repeat* it so often 2, 3, or 4 times *perniciously*, this is highly to be *Censured*, their being other better wayes and means to *cool* the *blood* and *allay* the *Feaver*: But the *Galenists*, if they may not *Julip* and *Bleed* their patients in *Feavers*, they are *nonplust*; they are at a *loss*, and know not how

how this febrile *heat* is to be allayed otherwiſe, which makes them inſiſt upon the *repetition* of theſe *ſeeming*, but *deceitful* remedies.

I think now, 'tis time to have done with *Bleeding*; my diſcourſe was not intended ſo large upon this *ſubject*: But one thing more I muſt *mention* that had almoſt over-ſlipt me; and that is the opinion of a ſuppoſed *ſulphurous matter* inflamed in the *Blood*, which maintains this febrile *heat* in *Feavers*; as alſo in *hot* bodyes denominating the *conſtitution*, *ſulphureo-ſalinous*, as Dr. *Willis* diſtinguiſheth; and *grounds* himſelf upon this *opinion* in his diſcourſe of *Feavers*, as alſo in his *Tract* of the *Scurvy*. And this is taken up from the *ſimilitude* of our common *fires*, that burn and heat ſo long as there is any *combuſtible matter* to maintain it; of which *ſpirituous* and *ſulphureous* ſubſtances is moſt *inflamable*. From hence *Feavers* are accounted a *deflagration* of the *Blood* in like manner from *ſulphureous* kindled matter, that makes the *preternatural heat*: And from this *notion*, are the *intentions* of *cure* framed and deſigned. But I am otherwiſe perſwaded, and do anſwer.

Lib. de Feb. cap. 7. Tract. de Scorb. cap. 1. &c.

First,

First, That this *æstuation* of the *blood* in *hot* bodies *denominating* the constitution *bilious*, or * *sulphureo-salinous*; in high or *intense Feavers*; does not arise from a *sulphurous deflagration*; but a preternatural *fermentation* and *ebullition*, from a dissent and difference between *immiscible* principles: As *acid spirits*, joyned with some *fixed salts*, though neither of them *sulphureous* and inflamable; yet by their *contest* and repugnancy, cause *smoak*, *heat* and *boyling*.

* According to Dr. Willis.

Secondly, That the *Archæus* or vital *spirits* as they do preserve and maintain natural *temperate heat* in a state of *health*, being vigorous *placid* and *calm*; So likewise do they *excandescere*, wax hot, burn, and are restless, by *irritation* and *provocation* from any *morbifick* matter (not *sulphurous*) or dyscrasy; *à causa occasionali quacunque*.

Thirdly, That common *elementary fire*, and our Vital heat; as they do *generically* differ, and stand upon a farr different *basis* and *principles*, so are they *maintained*, *intended*, *remitted*, or *extinguished*, by farr different waies and means, and therefore not to be drawn in or associated *parallelõs*; nor their

their *causes* to have any such *affinity* or *parity*.

Fourthly, That there is more *spirit*, and *sulphur* or oleaginous matter, in a person of *temperate heat* and in good *health*, than in him that *burns*, or is of a *hot feavorish* temper: And therefore this *calor febrilis* is not, or doth not arise, *a sulphure accenso*; but *ab Archæo irato æstuante*, and the principles of the *blood* contesting, and having *reluctance* with each other. This will be verified upon a *hectick consumptive* person, that burns and is fiery hot; whose blood abounds with an acrid Serosity, having lost its *sulphureous* and *spirituous* balsamick properties.

Fifthly, That the *sulphureous* and *oleaginous* part of the blood being most volatile and subject to be preyed upon, and consumed by heat; is first *wasted* and *destroyed*, as an *effect* of this preternatural *heat*, not the *cause*; and therefore not properly *denominating* the *constitution* in this condition, being in a *state* of continual *diminution* and *decrease*.

How soon does *pain* cause *heat* in the body? And this *pain* being *ceased*, the heat *vanisheth*. Now we cannot in rea-

reason imagine, that this *heat* ariseth from a kindled *sulphur*; that must go *out*, and *in*, so oft as the pain *comes* and *goes*. Also upon the over-eating of *plumms*, *apples* and drinking of much *small-beer*, in Summer; we know that a *Surfeit* and *Feaver* is commonly procured: Now *apples*, *small-beer*, and such like is more probable to *extinguish* any *sulphureous* matter *inflamed*, than to *kindle* it or *maintain* it. Therefore say I, *Febrile heat* is not *a sulphure exaltato & accenso*, but (briefly) as aforesaid.

Now to return to our subject *Phlebotomy*, shewing the inconvenience of *Bleeding* Scorbutick persons, as a *general remedy* respecting the *dyscrasy* and *impurity* of the *Blood*: I shall conclude it, and give you the *result* and *summ* of the *discourse*, in this following *Corollary*.

Where there is a *Plethora* urging, and for want of *ventilation*, causing an *acute disease*, eminently threatning the *life* by suddain *tempest*; *Phlebotomy* may lawfully be *celebrated*, as being the most *speediest relief* in such cases to *abate* the *turgency* of the *Blood*: But in *Chronick diseases* that are slow of motion, giving

time

time and *ſpace* for the uſe of *Medicines* and a good *dietetick regiment*; thoſe *indications* that ſeemingly require *Phlebotomy*; are much better ſatisfyed by other means, and *medicinal remedies*. Since then the *exhauſtion* of blood by *Phlebotomy*, does not *meliorate*, but *minorate* the blood; does not *incourage* and *vigorate* nature, but *weaken* and *impoveriſh*; does not *promote* the office of *ſanguification*; does not *ſeparate* and *depurate*: It is not therefore to be admitted, as a *generous* and *general* remedy in *chronick* diſeaſes as the *Scurvy*, that gives time and leiſure for *emendation* of the *blood* by *means* that puts nature upon *ſeparation*, *elective evacuations*, and excretions; not *promiſcuous effuſions*, as *Phlebotomy*. *Anacephaleoſis.*

The next conſiderable in the *common method* of cure to be examined, is, *Purgation*; and that is appointed to be performed by ſuch *medicines* chiefly as *evacuate Melancholly*, ſuppoſing that *predominant humor* to be the cauſe of this *Diſeaſe*; but if I ſhould grant *melancholly* to be the *morbifick cauſe*, and that *Purgatives* do attract *electivè*; yet the *proceſs* of the Cure is not *rationally* grounded; for that this *melancholly*

(as

(as you say) is *degenerate* and changed from its *specifick* known nature, into that which is *secret* and *unknown*; *metamorphosed* and disguised by *occult properties*, arising from its *secret* and *new* Nature: So that it is not the same, but *another humour* distinct from what it was before: And now you must seek for *another Purger*, peculiar and different from the *common Purgers* of melancholly. And farther, here is a *great mistake*, in taking that to be the *morbifick cause*, which is the *morbifick effect*; That excrementitious matter which is purged out, is but the *product* or *effect* of the *Disease*, not the *cause*.

You must distinguish between the *Disease*, and the *product* thereof; *depraved* matter and *excrements*, are the *products* of a Disease, and may be the internal occasional *causes* of another Disease: But in respect of the *Disease* of which they are so a *cause*, they are *external*; that is, they are not the constitutive essential causes: For *Causæ constitutivæ & constitutum sunt simul in esse*: But occasional causes are *antecedet* and have *priority* of *existence*: So likewise the *product matter*, or effect is distinct and *separate* from the Disease; for that

the

the Disease hath a *real existence* before such a *production*; and also after this *degenerate* matter is *removed*, unless otherwise *obliterated*; or that nature *sua sponte* returns to her integrity and *rectitude*.

And here we must take a view of the *Purgatives* that are recommended to our use in *Scorbutick cures*, by all the *Authors* I meet with: *Senna*, *Polypody Epithymum* and *black Hellebore* are the chief; because they are supposed to purge *melancholy*: But all the tribe of common *purgatives* are brought in and intermixed with them; *Scammony*, *Jallap*, *Agarick*, *Turbith*, *Mechoacan* &c. But I dare pronounce these no *purgatives*; that is, they are not *verè purgativa*; although they cause *evacuation*, yet it is by their *laxative venome*, and disgustful *properties* that *stimulates* nature to *expulsion*; and not a friendly wholesome *abstersion*: provoking of stools is not sufficient to *denominate* and *entitle* any *drug* to the priviledg and office of a true *Purgative*; if it were so, hundreds more that are not *accounted*, might come in and challenge their place also in the Catalogue of *common Purgatives*.

That which is truely *Purgative* and deſerves that *title*; is gently *abſterſive*, *balſamick* and amicably *fermenting* with Nature for *ſeparation* and *excretion*; hath no evil *properties* to provoke nature; to *contaminate* and *vitiate* the parts where it paſs, and diſcharge its power: But theſe *purgatives* nature receives with *reluctance*, *nauſeat's* and is ſick with them; but is very *glad* to be *diſcharged* of them; many a one hath had as much *pain* and *ſickneſs* with theſe *purging medicines* as ever they had with their *diſeaſe*, or much more: How many have been upon the *rack* with them; and the bad *events* attending is not to be numbred.

If we take *notice* and *obſerve*, we ſhall find, that ſuch *perſons* who often *purge* with theſe *medicines*, are in *continual* need of *purging*; none *need purging* ſo much as they: For, theſe purgatives although they rake the *gutts*, and *force* nature to throw out what ever ſtands in their way; yet withall they *ſtamp* their *adverſe* and *virulent* properties upon the *parts* where they paſs and extend their power, which alters their *conſtitutional craſes* ſo, that their natural *fermentations* are eſtranged

ed and *perverted* from whence the alimentary *succus* is depraved and *vitiated*, by the evil *impressions* of these *drugs*: And you shall hardly meet with *any* that have much *used*, and are *addicted* to these *purgatives*, but their *complexions* are much changed for the *worse*, *pale*, *swarthy* or *yellow*; as I have known many *sadly* altered and *abused* by the constant use of these *purgatives*; some growing *lean* and *consumptive*, others *puff* up and *swell*; their *digestions* decayed, and the *vigour* of the body, *impaired* and *wasted*. If these be fit medicines to reduce the *discrasy* of parts in *Scorbutick persons* to their *integrity* and due *fermentations*, then I am very much *mistaken*; but I am well *satisfied* to the contrary.

Indeed, *Abstersion* or *purging* is the most frequent medicinal *operation* in *all cures*; and this is so much *insisted* upon and *relyed* on to bring relief, that if *purging* and *purging* will not *effect* the *business*, a great many practisers are at a stand: And the greatest *stress* of their *cures* lyes upon this *operation* and *bleeding*, with many. How industrious then ought they to be in finding out *medicines* that are truely *purgative* and

cleanſing; that may be no way *offenſive* and *injurious* to the body, being of ſo frequent uſe in moſt caſes: That as they carry off the *impurities* and excrementitious matter which is burdenſome to nature; ſo they may not *imprint* and leave behind them *evil impreſſions* upon the *parts*, that may beget a new ſupply and generate the like matter again.

The main *buſineſs* in *cures*, is not removing *ſuperfluous degenerate* matter only (although that is *neceſſary* too) but in *rectifying* and *roborating* the principal *parts*; which ſtabliſheth Nature, and ſettles the *faculties* upon their right *foundation*, that they do not *relapſe* and return to the old *courſe* and *bias* again. But how can this be *reaſonably* expected (although other good *medicines* be uſed) when theſe *deleterious purgatives* are ſo oft uſed, and a frequent recourſe to them for *evacuation*: Theſe muſt of neceſſity pervert the *tone* and *craſes* of the parts, and *alienate* their *genuine* and due *fermentations*: Therefore it ſeems ſtrange to me that Dr. *Willis* hath not deſerted theſe common reputed *purgatives*; but they are the purging *medicines* he uſeth

and

and appoints for all *Scorbutick perſons*, as his book declares. *Tract. de Scorb. Cap. 7.*

If it be *objected* againſt me, that theſe, at leaſt ſome of them, have been accounted and uſed for *purgatives* by all the *ancient Phyſicians* for many hundred *years*: I ſay, that is no *Argument* to convince me, nor reaſonable *ſatisfaction* to the World, that theſe purgers are *innocent medicines*; *Antiquity* is not ſufficient to clear and take off this charge laid againſt them; foraſmuch as *Antiquity* hath been found guilty of many *errors*, which a long time hath blinded the credulous *World*, too much *adoring Antiquity*, but now will no longer be deceived, but make *inquiry* whether ſuch things *accounted* and eſteemed, be ſo. If common uſe, and *ancient practice* be the beſt; and their *opinions* truth; then let us ſet down, and trouble our ſelves no farther with *inquiries* and *inventions*, but live upon the *labours* of our *predeceſſors*. This is the *force* and *ſcope* of the *argument*; but all this is frivolous and vain.

Let any one make it appear by *ſound reaſon*, and demonſtration in *practice*, that theſe are *innocuous purgatives*, amicable to Nature in all their *properties*

as a true purgative ought; *& erit mihi magnus Apollo*, then I will alter my *opinion* and return to their uſe, and ſtand up in *defence* of that *reputation* they have had in the World a long time; but until then I muſt *decry* them, as no true *purgatives* but *virulent ſtimulatives*.

Objection. But ſome may ſay, and *plead* in their defence, that *Experience* does witneſs for them that theſe common *purgatives* have done good, and many have received benefit by them.

Anſwer. I Anſwer; and grant that they have done *ſome good*; but let me tell all the *truth*; they have done much *harm* too: I have uſed and tryed them for ſome years, in *ſeveral diſeaſes*; have ſeen whereby their *goodneſs* comes about or happens; as alſo wherein their *evil* lyes: To do ſome *good*, and to do no *harm*, is the *property* and character of a good *medicine*; but it is not ſo with theſe *reputed purgatives*. When the body is *full*, and *foul*; Nature *loaded* and *oppreſſed*; then almoſt any thing that *ſtimulates* Nature to *evacuation*, gives her eaſe, ſhe is *alleviated* and *refreſhed* by it, though by *bad means*; and many ill *ſymptoms perhaps*

palliated

palliated or *abated* for a time. But all things rightly consider'd, here is no great *commendations* of the *medicine*, because but *accidentally* you received some help for the present; and withall lay a *foundation* for a *future* mischief.

If a man fall into a river, or is thrust in *purposely*, and thereby he is *cured* of an *Ague*, as such strange cures have happned; yet none I think will *commend* this as a good and *constant remedy* to have recourse too; because this *cure* is but *accidental* and not the *proper effect* of such a cause; besides the *inconvenience* and *hazard* that attends it. So likewise in these *purgatives*, though some *good* may happen for the *present*, in forcing Nature to *expulsion*, by the *abhorrency* she takes against them and is *provoked* to it; yet this is not a *friendly* and well contrived *operation*, Nature *amicably* joyning with the medicine; but a *stimulation* of Nature, wherein she throws out, and *empties* her self, by way of *disgust*, to quitt her self, and be freed from the *horrid medicine*, and the *humours* it does *contaminate* and mix with: So that the *evacuation* is Nature's; and the good that comes is *ac-*

cidental, from Nature's *conflict* with the *medicine*, and her *abilities* to throw it out; with which also some *depraved matter* that was in the way goes along with it and is cast out. But the *genuine* and *proper* effects of the *medicine*, is, to *contaminate* the body, and *corrupt* the *alimentary liquors* with its *virulent properties*, not to purify and *cleanse*.

Now whether this be *rational*, and *consonant* with the rules of *art*; to *establish* any *medicine* of constant use, that is noxious *per se*, in its own Nature *depraving* and producing future *mischief*, but *per accidens* some advantage does *accrue* sometimes, for the *present*; let common *reason* judg: And this is the *case* of those *purgatives* impartially and rightly *stated*.

If any one shall say, What? Are these *drugs* good for nothing? Must they be thrown away as *useless*? If I *answer*, they are not *fit* for the purpose of *purgation*, you may be satisfied for the *reasons* afore said: But to tell you what else they are good for, and how to be used, is not *necessary* for me now to *discourse*.

Purgation necessary.

Purgation or *cleansing* is præmitted as a *regular* and due *course* in the cure of most *diseases*; and it is *instituted* chiefly

to

to *cleanſe* the firſt *region* of the body, and to carry off what *ſuperfluous* or *degenerate* matter is to be voided by the *guts*: And this *operation* is neceſſary in the *cure* of moſt *diſeaſes*, though ſeated in other *parts*: For, although the *infirmity* lye not in the firſt *region* of the body, neither in the *ſtomack*, *gall*, *guts*, *meſentery*, *liver*, nor *ſpleen*; yet 'tis *aggravated*, if thoſe parts be *foul*: and *probably* may be the *original* and foundation of thoſe *remote infirmities*, by *conſent* or *tranſmiſſion*; nor ſhall medicines carry its vertue without *impediment* and *abatement*, or food *clearly* and *cleanly* conveighed to *nouriſh* the body, if theſe parts be *foul*, clogged, and *obſtructed*.

Now ſince it is ſo; that *evacuation* and *cleanſing* is neceſſary in moſt *caſes*, and this *operation* ſo uſeful and moſt *frequent*; then how careful and exact ought *Phyſicians* to be in making choice of ſuch *ingredients*, in preparing and *contriving* them into ſuch wholeſome *medicines* as may *perform* this *operation*, with as much *kindneſs* and *friendſhip* to Nature, as other *operations* are *performed*: Not every *medicine* that cauſeth ſtools; not any *purgative* that *ſtimulates* by

by a *laxative venom* will do your buſineſs; but ſuch as are *balſamick*, having *amicable abſterſive* properties no way injurious to *Nature*.

'Tis very *conſiderable* the choice of a fit and good *medicine*, that will cleanſe the *ſtomack*, *guts*, *meſentery*, &c. without offering *injury* to their peculiar *craſes* or *ferments*; that is, not to *alienate* them from their proper *diſtinct natures*, not to *impreſs* and ſtamp new *qualities* upon them; this is a *medicine* you may freely uſe, and *expect* good *relief* from, in keeping the forenamed parts *pure* and *clean*; as alſo a great *aſſiſtant* and *help* in the performance of divers *cures*, and ſuch a *medicine* is to be uſed in the *cure* of *Scorbutick perſons*: But if you uſe *purgers* (falſly denominated) of a *deleterious* and *virulent* quality, that operate *per modum veneni*; they will *characteriſe* their *virulencies* and *exotic* adverſe *properties* upon the *parts* deſtinated for nutrition, alienate and *debilitate* them in their *functions* and *offices*; that the often uſe of them will *impair* Nature very much, though ſometimes, for the preſent, *alleviation* to Nature does *accrue* from the *evacuation* procured, though by bad means. And

thus

thus much ſhall ſuffice to be ſaid of the *purgatives* and *purging* medicines, generally appointed and uſed for the *Scurvy*.

I intended to examine ſome other *medicines*, and thoſe called *ſpecificks*; ſet forth and *commended* in the *tracts* and *books* of this diſeaſe; to note ſome errors in thoſe *præſcripts*; and to ſhew the *inefficacy* and *improbability* (of ſome) to anſwer thoſe *purpoſes* they are *deſigned* for; as alſo their *inartificial* preparations and *incongruous* compoſitions, not *accommodated* by the beſt *rules* of the *pharmaceutick Art*; ſhewing that the *contrivers* of ſuch *medicines*, were not *pharmacopœians* and expert *Operators*; but have borrowed from *tradition*, and taken them up upon *truſt*, without due *examination* and *tryal*. But time will not permit me at preſent, to lead you through the whole medicinal *apparatus* provided and *appointed* for this *diſeaſe*; I muſt wave that until another opportunity.

CHAP.

CHAP. XIII.

The Author's Method, and Medicines, for the Scurvy.

AS I have been always *dubious* and very *diffident* in relying on the *opinions* and determinations of *Authors* without ſtrict *examination* (though very *learned men*) in the *account* they give of diſeaſes: So likewiſe have I been very *jealous*, and much *unſatisfied* in *traditional medicines*; being oft *diſappointed* by *truſting* too much and relying on their common *fame* and *credit*, raiſed up and ſupported by *books* of great *eſteem* and general repute.

To avoid ſuch *diſappointments* and fruſtrated *expectations*; and that I might build upon, and *ſtabliſh* my ſelf, on my own *foundation* of *experiments* and *tryals*; I reſolved, and made it my *grand buſineſs* (as it is every *Phyſician's* duty) to ſearch into and *prove medicines*, by perſonal *inſpection* and *manual operation*: Knowing that no *skill* or *know-*

knowledg of medicines, is so *sweet*, *certain*, and *satisfactory* to any man, as that which is *gained* by *various proofs* and *tryals* from his own *hand* and *eye*. And indeed there is no *true knowledg* in medicines, but what is acquired this way, by a *diligent* and *constant* pursuit: And he that thinks or *pretends* to have *skill* and a well-grounded *knowledg* in *medicines* by any other way than this; *deceives* himself and others.

If a *Physician* hath not been a *pharmacopœian*, proving and *satisfying* himself in the various *preparation* and making of *medicines*; he is not, he cannot be *expert* and knowing in *medicines* as he ought; but *commits* great *errors* and *absurdities* in the designing and *appointment* of medicines: Which more at large I have set forth in my *Medicus absolutus*, *Tract.* X. traversing this question; *Whether a Physician ought to make his own medicines.* *Medicus. absolutus. tract.* X.

And although a *Physician* be *learned* and well *prepared* with the knowledg of *books*, and *traditional instructions*, before he enters into his *Laboratory* to operate; he shall notwithstanding (being but a *Tyro*) find great *perplexities* and *disappointments* for some years, before

before he can *fix* himself, be well *pleased* and fully *satisfied* in medicines; to answer *compleatly* and *certainly*, the *indications* and designed *operations*, that *practice* will put him upon, and require from him, to *effect cures* by. I have in this *point*, been very *unsatisfied*, and *fluctuating* in this *way*, and that *way* of preparation; have tryed *this* and *that*, unto weariness; finding many *delusions* that *pharmacopœia's* are stuft with; and the *encomiums* that many *Authors* gives of medicines, to be but *ignes fatui*, deceitful *lights* to follow and trust to. But, as *Helmont* sayes, *Vexatio parit intellectum*; having been lead aside also and *deluded*: This time and pains in *tryals* was not lost, but some *benefit* and *knowledg* is drawn from *deceitful* experiments: And leaving those *false guides*, a mans own *experience* then is his best *Author*, to instruct and lead him to see wherein the *excellency* of medicine lyes, and how to be *attained*.

Medic. absolut. tract. xi *pag.* 136.

After this manner, and by this *course*, for some years, *tandem aliquando*, I perfected and *acquired* some *medicines*, I think hath *recompenced* my *time* and *trouble*; that *have*, and will *redound* to the

the *benefit* and *relief* of many. And finding the *Scurvy* to be the *foundation* of many *evils*, and *diverse diseases* to be rooted *here*, and take their *rise* from *thence*; or much *aggravated* by it; and that in the cure of most *diseases* in *Scorbutick* persons, *special regard* must be had to the *Scurvy*, with potent *anti-scorbuticks*, or their *cures* will not *succeed* well: I therefore spent much *time* and *pains* in designing and *preparing* radical *medicines*, to answer the chief *intentions* of cure, in all *Scorbutick* cases. But before this could be *effected*, and brought about so, as to give me *satisfaction* and content; some *years* passed away in the *variation* of medicines, by *sundry tryals* and *experiments*; before I could bring them to *perform* their several *operations*, safely, *certainly*, with that *ease* and *pleasentness* to the *patient* as I aimed at.

The *Antiscorbutick* medicines thus gradually *reformed* and *improved* by divers *repeated* tryals of *preparation*, and constant *use* in my *practice* (for seven *years*) are these three several forms; *Pills*, *Elixir*, and an *Extract*, of different and *distinct operations*; answering and *accommodated* to the three *grand*

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intentions of cure, ſome of which, if not all *three*, are to be *proſecuted* in all *Scorbutick caſes* and perſons: Theſe three *intentions* of *cure*, are different *claſſes* of *medicinal operation*, which being rightly purſued with *effectual medicines*, well *deſigned* and *prepared*, will profligate the *Scurvy*, and the various attending *ſymptoms*; reſtore Nature to the *integrity* of her *functions*, and deſired *ſanity*; as much as every *individual* ſubject is capable to be *reduced*.

The firſt *Claſſis*, is *Purgation*, or *cleanſing*, to carry off that *Scorbutick impurity* or degenerate matter lodged in the *ſtomack* and *bowels* of the firſt *Region*: And for this purpoſe the *Pills* are deſigned to *operate*.

The ſecond *Intention* to be proſecuted, is *ſtrengthning* and *rectifying* of the *digeſtive* faculties, *debilitated*, or *alienated* from the *regularity* and conſtant *performance* of their *functions*: In vain it is to *cléanſe*, unleſs the *faculties* alſo be *reſtored* and *roborated*; and a good *craſis* of parts *ſettled* and *confirmed*, to *prevent* the like *indigeſted* or *depraved* matter, and *relapſing* into the *old* condition. And to *perform* this work the

Elixir

Elixir was contrived: To *vigorate*, *re-inforce*, and quicken Nature, by *ſtrengthning* the *ſprings* or chief *movent principles* of the digeſtive *offices*. The third, is *Depuration* of the *blood* and *nervous* juice, and *cleanſing* the whole *habit* of the *body*, which is *ſtained* with a *Scorbutick* impurity; ſending it forth by the *emunctories* and *veins* of the *body*, that Nature hath *provided* for that *purpoſe*, to *diſcharge* and *relieve* her Self. And to *perform* this *operation* the *Extract* was conſtituted, *adapted* and *fitted* for this *ſervice*; which *operates* chiefly by *Tranſpiration* and *Urine*.

Now theſe three *Medicins*, appointed for their *ſeveral* operations in *Scorbutick* cures; I *uſe* after this *manner*, and in this *order* following; (except, ſome *ſpecial* complication, or *peculiar propriety* of body, upon *examination* or *tryal*, do cauſe me to *alter* any thing in the medicine, or *vary* from the *uſual* method or *courſe*; as ſometimes it may *happen*, yet *ſeldom*:)

I begin with the *Scorbute-Pills*: Firſt I appoint a doſe of *Pills*; and intermit 2 *dayes*: then a *ſecond doſe*, and intermit 3 *dayes*: Then a *third doſe*, and intermit 4 *dayes*: Continuing that *intermiſſi-*

on, afterwards; or a *longer*, if the patient be weak. A *doſe* of theſe *Pills* I account to be three, for moſt *perſons*: but, becauſe *bodies* differ much in *purgeing*; for ſome, two are *ſufficient*; others *require* three; And ſome four *Pills*; thoſe that are very *hard* to *work* upon: Therefore it is beſt to *try* the *body*, the firſt time with two *Pills*; and *encreaſe* afterwards as the *condition* of the *body* is to *operate*; aiming at five or ſix *Stools* in a *day* and no more, which is *ſufficient*, and beſt. Theſe *Pills* are taken thus: One at *night* going to *bed*, having eaten but a *light ſupper* at ſix of the clock, before: The other next *morning* early, and may *ſleep* an hour after, but not *longer*, that the *operation* of the *medicine* may not be *checkt*. When they are up, to drink ſome warm *Poſſet-drink*, and between *Stools*. For going abroad after theſe *Pills*, (if it be *deſired*, or occaſions *requiring*) I give *liberty*, if the *patient* be able for it; not *tender* and apt upon ſmall *occaſions* to take *cold*; the ſeaſon *temperate*, and having *moderated* the *doſe* ſo, as to *work* but three or four *times*: But if otherwiſe, keep in. For times of the *year*; they are *ſafely* and with *benefit* taken in any *month*;

month; the patient being *discreetly* ordered, *sutable* to the *season* of *heat* or *cold*: This *climate* does not forbid *Physick* at any time, the *disease* requiring it.

The second *medicine* to be taken in this *course*, is the *Elixir*; to rectify and *cherish* the *parts* that are *dyscrasted*, *languid* and *weak*, degenerated and fallen off from their *dutyes*, and *abated* in their *vigour* and *acuteness* of *ferment*; to *correct* the *errors* and defects of the *digestions*: That, as the *Pills* cleanse and carry off *superfluous* degenerate *matter*; so, this *medicine* I appoint to *strengthen* and *fortify* the *faculties*, to restore and *confirm* them in the *performance* of their *functions*; that Nature may not soon *relapse* into the former *declining state*. This *medicine* I give every *intermitting day* between Purging; so that the patient (though perhaps *weak* and *spent*) is not *impaired* in *strength*, or brought *lower* by purging; but is daily more *enlivened*, *brisk*, and *chearful* by the assistence of this *medicine*. The *dose* I allow of this *Elixir* to a *man* or *woman*, is thirty *drops*; but they begin with sixteen; and encrease two *drops* every *day* until they *ascend* to thirty, and

there *continue*. It is to be taken in a *ſpoonful* of good *Canary* every *morning* (purging-dayes excepted) faſting an *hour* and *half* after: And likewiſe at five of *clock* after-*noon*, if they have forborn *eating* or *drinking* ſince *dinner*.

The third *Antiſcorbutick* medicine in *courſe*, is the *Extract*; which operates by *tranſpiration* and *urine*: And this is ordained to *depurate* the blood and *nervous liquor*; and to *cleanſe* the whole *habit* of the *body*, from any *ſerous* impurity and *degenerate Scorbutick* matter, that lodg and *infeſt* thoſe *parts*. And this *medicine* I find ſo *uſeful* in *cures*; that many *ſymptoms*, ariſing from the *Scurvy*, are not *reached* and *ſubdued*, but by a medicine of this *operation*. Purging does *well*, and ought to be *premitted* in moſt *caſes* for carrying off all *morbifick matter* in the lower *region* of the *body*, and what is fit to paſs out by the *guts*: But the maſs of *blood* and *nervous liquor* being *tainted* and *impure*; the *habit* of body and parts *irrigated* and *fed* from thence are not *purified* and *cleanſed* as they ought, but by *aſſiſting* of Nature in her *daily work* of *tranſpiration*, and *ſequeſtration* by the

the *urinary* ductures: And in *promoting* theſe natural *conveiances*, and ſending forth by theſe *emunctories*; Nature is much *relieved* daily, and gets *victory* over many *infirmities*. This *Extract* I give to a *man* or *woman*, from a *dram* and half, to 2 *drams* and an half: which is from the quantity of a *Nutmeg* to a *Cheſnut*; beginning always with the leſſer *doſe*, and *increaſing* the *quantity* afterwards as the *body* requires. It may be taken upon a *knifes*-point, rolled in *Sugar*; or diſſolved in a little *White-wine-Poſſet*, or *Mace-Ale*; and a quarter of an *hour* after, to drink a good draught of the ſame, and *ſleep*; being taken moſt commonly at night in bed; having eaten but a light ſupper (or none) at ſix a *clock*, before. And this *medicine* is thus uſed *twice* in the *week*; or *thrice*, every other *day*: (After 3 *doſes* of the *Pills* have been taken, to *cleanſe* the *ſtomack* and *bowels*, before they begin this Extract:) Continuing the other medicines alſo in their turns: Noting that the *Elixir* and Extract may be taken both, in a day; but the *Pills* being purging, admit no other medicine that day they operate.

In

there *continue*. It is to be taken in a *ſpoonful* of good *Canary* every *morning* (purging-dayes excepted) faſting an *hour* and *half* after: And likewiſe at five of *clock* after-*noon*, if they have forborn *eating* or *drinking* ſince *dinner*.

The third *Antiſcorbutick* medicine in *courſe*, is the *Extract*; which operates by *tranſpiration* and *urine*: And this is ordained to *depurate* the blood and *nervous liquor*; and to *cleanſe* the whole *habit* of the *body*, from any *ſerous* impurity and *degenerate Scorbutick* matter, that lodg and *infeſt* thoſe *parts*. And this *medicine* I find ſo *uſeful* in *cures*; that many *ſymptoms*, ariſing from the *Scurvy*, are not *reached* and *ſubdued*, but by a medicine of this *operation*. Purging does *well*, and ought to be *premitted* in moſt *caſes* for carrying off all *morbifick matter* in the lower *region* of the *body*, and what is fit to paſs out by the *guts*: But the maſs of *blood* and *nervous liquor* being *tainted* and *impure*; the *habit* of body and parts *irrigated* and *fed* from thence are not *purified* and *cleanſed* as they ought, but by *aſſiſting* of *Nature* in her *daily work* of *tranſpiration*, and *ſequeſtration* by the

the *urinary* ductures: And in *promoting* these natural *conveiances*, and sending forth by these *emunctories*; Nature is much *relieved* daily, and gets *victory* over many *infirmities*. This *Extract* I give to a *man* or *woman*, from a *dram* and half, to 2 *drams* and an half: which is from the quantity of a *Nutmeg* to a *Chesnut*; beginning always with the lesser *dose*, and *increasing* the *quantity* afterwards as the *body* requires. It may be taken upon a *knifes*-point, rolled in *Sugar*; or dissolved in a little *White-wine-Posset*, or *Mace-Ale*; and a quarter of an *hour* after, to drink a good draught of the same, and *sleep*; being taken most commonly at night in bed; having eaten but a light supper (or none) at six a *clock*, before. And this *medicine* is thus used *twice* in the *week*; or *thrice*, every other *day*: (After 3 *doses* of the *Pills* have been taken, to *cleanse* the *stomack* and *bowels*, before they begin this Extract:) Continuing the other medicines also in their turns: Noting that the *Elixir* and Extract may be taken both, in a day; but the *Pills* being purging, admit no other medicine that day they operate.

In

In breif; Thoſe perſons that uſe theſe 3 *Antiſcorbutick* medicines, do obſerve this order; except ſome ſpecial caſes, and ſingular propriety of body upon examination, or tryal, cauſeth alteration: Firſt, they beginwith the *Scorbute Pills*, to cleanſe the center of the body, as the *ſtomack*, *guts*, *meſentery* &c. The next day, and all the intermitting dayes between purging, they uſe the *Elixir*, to ſtrengthen the faculties and rectify the digeſtions: And after 2 *doſes* of *Pills* taken, they begin the Extract, to purify the blood, and cleanſe the habit of the body; proceeding alſo with the other medicines, in their turns, as before. And during this courſe (if nothing prohibit) I appoint for their mornings-draught, and between meals (if occaſion to drink) *Worm-wood Beer* or *Ale*, well brewed: Or *Wormwood-Wine*.

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